<u>Cybercrime, Cyberforensics and</u> <u>Electronically Stored Information</u>

Joint Presentation of
Northern California East Bay Chapter
Institute of Internal Auditors
And
San Francisco Chapter
ISACA
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Presentation Overview

- Cybercrime An Evolving Landscape
- Cyberforensics The Heavy Lifting
- Questions and Answers

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Disclaimers

- I am not a lawyer and nothing in this presentation should be construed as legal advice. If you have questions please consult your personal or corporate legal counsel.
- Furthermore, nothing in this presentation reflects information regarding Safeway, its employees, its business partners or its position with regard to any of the material presented.

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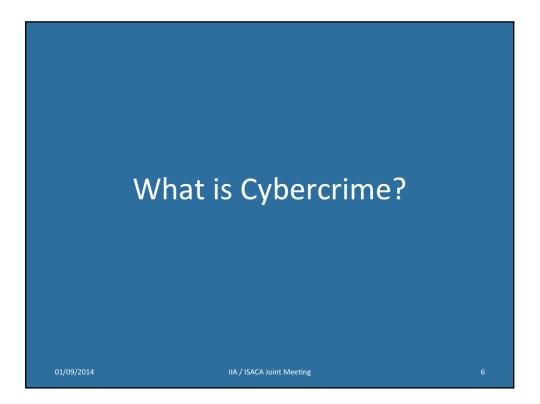
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<u>Cybercrime – An Evolving Landscape</u>

- What is cybercrime?
- Is cybercrime a serious threat?
- What types of cybercrime are most prevalent?
- How can you protect yourself from cybercrime?
- What are your options if you think you or your company is a victim of a cybercrime?

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What is Crime?

Crime [krahym]

noun

- 1. <u>an action or an instance of negligence</u> that is <u>deemed</u> <u>injurious to the public welfare or morals or to the interests of</u> <u>the state</u> and <u>that is legally prohibited</u>.
- 2. criminal activity and those engaged in it: to fight crime.
- 3. the habitual or frequent commission of crimes: a life of crime.
- 4. any offense, serious wrongdoing, or sin.
- 5. a foolish, senseless, or shameful act: It's a crime to let that beautiful garden go to ruin.

http://dictionary.reference.com/browse/crime

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Current slide:

Something you did, or something you failed to do, that is "deemed injurious" (i.e., causes harm) to "the public welfare or morals" (prevailing attitudes of society) or to "the interests of the state" (i.e., the government that codifies the crime) AND "that is legally prohibited". This is an essential element – if it is not legally prohibited then it is not a crime.

Lead-in to next slide:

The primary type of crime associated with computers is fraud.

Fraud

Fraud [frawd]

noun

- 1. <u>deceit, trickery</u>, sharp practice, or <u>breach of confidence</u>, perpetrated <u>for profit or to gain some unfair or dishonest advantage</u>.
- 2. a particular instance of such deceit or trickery: mail fraud; election frauds.
- 3. any deception, trickery, or humbug: That diet book is a fraud and a waste of time.
- 4. a person who makes deceitful pretenses; sham; poseur.

http://dictionary.reference.com/browse/frauc

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Current slide:

In particular we will be discussing crimes involving fraudulent behavior often perpetrated using false personas or falsely using real personas.

So, could the government have defined crimes involving electronic communication 100 years ago? Yes – with telegraphs and telephones.

Lead-in to next slide:

What are the chances that you inadvertently committed a crime today?

40,000 New Laws

"Across the US, <u>40,000</u> new federal, state and local laws are set to go into effect [on 1/1/2012], ranging from states requiring ID's to vote, minimum wage hikes and rules for light bulbs."

Many of these new laws relate to the use of computers, mobile phones and the Internet as facilitating illegal behaviors.

http://www.nbcnews.com/id/45819570/ns/us_news-life/t/new-laws-toughen-rules-abortions immigrants-voters/ IIIA / ISACA Joint Meeting

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What is Cybercrime?

Simply put "a cybercrime is a crime committed within cyberspace."

So what is cyberspace?

cy·ber·space [sahy-ber-speys] noun

- 1. the realm of electronic communication.
- 2. virtual reality.

Coined in 1982, often as two words at first, by science fiction writer William Gibson (best known for "Neuromancer") and used by him in a short story published in 1982, from cyber- (see cybernetics) + space.

http://dictionary.reference.com/browse/cyberspace

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- The perpetrators or criminals can remain hidden
- The perpetrators or criminals can choose the jurisdictional venue to operate from
- The means to commit the crime can remain hidden or obscured
- Evidence regarding the crime may be more difficult to identify, collect and attribute
- Criminally acquired assets may be hidden or placed into jurisdictional limbo

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- The perpetrators or criminals can remain hidden
 - They can work through third party services such as BotNets
 - They can use relay services or systems to reduce the chances of detection and identification
 - They can use false personas
 - They can falsely use real personas
 - They can change personas frequently
 - They can operate as part of a larger organization

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- The perpetrators or criminals can choose the jurisdictional venue to operate from
 - They can operate from countries such as Romania and Latvia that have very different laws regarding cybercrime
 - They can more easily coordinate with partners in other jurisdictions
 - They can "virtually" re-locate from one jurisdiction to another

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- The means to commit the crime can remain hidden or obscured
 - The tools to commit the crime can be hidden malware, rogue websites, or even armies of volunteers dispersed in cyberspace
 - The criminal activity can be buried under a blanket of legitimate activity
 - The electronic "footprint" of the activity can be erased as the last step in the crime

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- Evidence regarding the crime may be more difficult to identify, collect and attribute
 - The evidence may be dispersed across multiple computer systems in multiple locations (possibly numbering in the millions)
 - The cataloguing of the information with proper chains of custody may be very labor intensive
 - Attributing a specific piece of electronic evidence to a specific perpetrator may be very difficult

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- Acquired assets may be hidden or placed into jurisdictional limbo
 - Intellectual property assets make be encrypted and electronically transmitted for storage in one or more locations
 - Financial assets may be easily transferred to nonreciprocating jurisdictions

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Cloud storage providers are available world-wide at dirt cheap prices – many with the first few gigabytes free.

- 1.Amazon Cloud Drive 5GB
- 2.DropBox 2GB
- 3.SugarSync 5GB
- 4.MegaCloud 8GB
- 5.Google Drive 5GB
- 6.Microsoft SkyDrive 7GB
- 7.JustCloud Unlimited
- 8.Box 5GB

Note: More and more jurisdictions are agreeing to report out financial asset transactions and holdings to other countries. "Caymans Sign Up To British FATCA" (http://www.iexpats.com/caymans-sign-british-fatca/). FATCA refers to the US Foreign Account Tax Compliance Act, which comes into force in 2014.

Means, Motive and Opportunity

- Means—the tools are there, nicely catalogued and ready to go.
- **Motives**—with so much on the Internet, motives are there.
- Opportunity—there are many, many access points to the Internet. Most are inexpensive, some are free (your local library).

Cybersleuthing: Means, Motive, and Opportunity
http://www.sei.cmu.edu/library/abstracts/news-at-sei/securitysum00.cfm

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The Blurry Line of Cybercrime

- Is the unauthorized copying of music a cybercrime?
- Is a crank call a cybercrime? What if it uses a service to hide the caller's identity?
- When does an unflattering text message become cyber-bullying?
- Is forging a fake invoice using a computer a cybercrime or just fraud?

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<u>Is the unauthorized copying of music a</u> <u>cybercrime?</u>

Federal law provides severe civil and criminal penalties for the unauthorized reproduction, distribution, rental or digital transmission of copyrighted sound recordings. (Title 17, United States Code, Sections 501 and 506).

http://www.riaa.com/physicalpiracy.php?content_selector=piracy_online_the_law

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17 USC § 501 - Infringement of copyright

(a) Anyone who violates any of the exclusive rights of the copyright owner as provided by sections 106 through 122 or of the author as provided in section 106A (a), or who imports copies or phonorecords into the United States in violation of section 602, is an infringer of the copyright or right of the author, as the case may be. For purposes of this chapter (other than section 506), any reference to copyright shall be deemed to include the rights conferred by section 106A (a). As used in this subsection, the term "anyone" includes any State, any instrumentality of a State, and any officer or employee of a State or instrumentality of a State acting in his or her official capacity. Any State, and any such instrumentality, officer, or employee, shall be subject to the provisions of this title in the same manner and to the same extent as any nongovernmental entity. (http://www.law.cornell.edu/uscode/text/17/501)



http://www.fcc.gov/guides/caller-id-and-spoofing

Truth in Caller ID Act of 2009

The Truth in Caller ID Act of 2009, which was signed into law Dec. 22, 2010, **prohibits** caller ID spoofing for the purposes of defrauding or otherwise causing harm. In June 2010, the Federal Communications Commission adopted rules implementing the Truth in Caller ID Act.

FCC Rules

- Prohibit any person or entity from transmitting misleading or inaccurate caller ID information with the intent to defraud, cause harm, or wrongfully obtain anything of value.
- Subject violators to a penalty of up to \$10,000 for each violation of the rules.
- Exempt authorized activities by law enforcement agencies and situations where courts have authorized caller ID manipulation to occur.

When does an unflattering text message become cyber-bullying?

The National Crime Prevention Council defines cyber-bullying as "the process of using the internet, cell phones or other devices to send or post text or images intended to hurt or embarrass another person."

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When does an unflattering text message become cyber-bullying?

In 2011, approximately 9 percent of students ages 12–18 reported being cyber-bullied anywhere during the school year. Of those students, about 4 percent each reported that another student had posted hurtful information on the Internet and reported being the subject of harassing text messages.

Bureau of Justice Statistics report: Indicators of School Crime and Safety - 2012 (June 2013) - http://www.bis.gov/content/pub/pdf/iscs12.pdf

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Is forging a fake invoice using a computer a cybercrime or just fraud?

"False invoicing occurs when an employee generates a false payment by submitting a fraudulent invoice for products and services never delivered or rendered. To carry out these schemes, the fraudster must generate a fictitious invoice; with the help of computers, there are various ways to do this. For example, an employee might use images downloaded from the Internet, scanners, printers, desktop publishing software, and other computer-based tools to generate false invoices."

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Association of Certified Fraud Examiners (ACFE)

Issues the Certified Fraud Examiner (CFE) certification

The Top 5 Frauds of 2013 - http://www.acfeinsights.com/acfe-insights/2013/12/23/the-top-5-frauds-of-2013.html

ACFE Case Studies - http://www.acfe.com/case-studies.aspx

Encyclopedia of Cybercrime

Proliferation of computing and networked devices throughout the world, including computers, PDAs, and cellular phones is among the most profound technological changes in human history. Increasing capacity of information technologies (IT) to transform ways we work and function as a society is unprecedented. However, any technological advancement provides potential avenues for abuse and harm. Behaving in ways that are uncommon or unacceptable within a particular cultural setting may be considered deviant. When deviant acts rise to a level of causing harm, they are considered to be against the law (i.e., criminalized). ''Cybercrime'' is a broad term covering all the ways in which computers and other types of portable electronic devices such as cell phones and PDAs capable of connecting to the Internet are used to break laws and cause harm. A slightly more technical definition would be ''use of computers or other electronic devices via information systems such as organizational networks or the Internet to facilitate illegal behaviors'' (McQuade, 2006, p. 16).

ENCYCLOPEDIA OF CYBERCRIME, Greenwood Press, 2009, Edited by Samuel C. McQuade, III 01/09/2014 IIA / ISACA Joint Meeting

<u>Cyber Extortion –</u> <u>Extortion by computer and internet</u>

The cliché, "the more things change the more they stay the same" applies to the new era of extortion. The traditional crime of extortion is defined as an attempt to threaten a person or entity into giving up something in exchange for not being harmed in some way. Cyber extortion merely modernizes this crime by using the Internet and computers to carry out a wide variety of threats.

http://www.acfe.com/article.aspx?id=4294967630

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Cyberstalking and Cyberharassment

Cyberstalking is the use of the Internet, email or other electronic communications to stalk, and generally refers to a pattern of threatening or malicious behaviors.

Cyberharassment differs from cyberstalking in that it may generally be defined as not involving a credible threat. Cyberharassment usually pertains to threatening or harassing email messages, instant messages, or to blog entries or websites dedicated solely to tormenting an individual.

Cyber + (Name your Crime)

The National Computer Security Survey (NCSS) documents the nature, prevalence, and impact of cyber intrusions against businesses in the United States. It examines three general types of cybercrime:

1) Cyber attacks are crimes in which the computer system is the target. Cyber attacks consist of computer viruses (including worms and Trojan horses), denial of service attacks, and electronic vandalism or sabotage.

http://www.bjs.gov/index.cfm?ty=tp&tid=41

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Cyber + (Name your Crime) (cont.)

- 2) Cyber theft comprises crimes in which a computer is used to steal money or other things of value. Cyber theft includes embezzlement, fraud, theft of intellectual property, and theft of personal or financial data.
- 3) Other computer security incidents encompass spyware, adware, hacking, phishing, spoofing, pinging, port scanning, and theft of other information, regardless of whether the breach was successful.

http://www.bjs.gov/index.cfm?ty=tp&tid=41 01/09/2014 IIA / ISACA Joint Meeting

<u>Is Cybercrime a Serious Issue?</u> <u>Follow the money!</u>

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Big Bucks are Being Spent on Law Enforcement to Address Cybercrime

Many agencies are involved with combatting cybercrime:

- •Federal Bureau of Investigation (FBI)
- •US Secret Service (USSS)
- •Internet Crime Complaint Center (IC3)
- •National White Collar Crime Center (NW3C)
- •And more...

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The FBI's fiscal year (FY) 2014 budget request totals \$8.4 billion in direct budget authority, including 34,787 permanent positions (13,082 special agents, 3,026 intelligence analysts, and 18,679 professional staff). This funding level provides critical funding to address threats posed by terrorists, cyber attackers, and criminals.

http://www.fbi.gov/news/testimony/fbi-budget-request-for-fiscal-year-2014

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As this committee knows, the cyber arena has significantly changed over the last decade. Cyber attacks and crimes are becoming more commonplace, more sophisticated, and more dangerous. The scope and targets of these attacks and crimes encompass the full range and scope of the FBI's criminal investigative and national security missions. Traditional crime, from mortgage and health care fraud to child exploitation, has migrated online.

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There is always more work to be done, but we have had some success, including the 2011 takedown of Rove Digital, a company founded by a ring of Estonian and Russian hackers to commit a massive Internet fraud scheme. The Rove Digital scheme infected more than four million computers located in more than 100 countries with malware. The malware secretly altered the settings on infected computers, enabling the hackers to digitally hijack Internet searches using rogue servers for Domain Name System (DNS) routers and re-routing computers to certain websites and ads.

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We have also worked against infrastructure we believe has been used in distributed denial of service (DDoS) attacks, preventing it from being used for future attacks. Since October, the FBI and DHS have released nearly 168,000 Internet Protocol (IP) addresses determined to be infected with DDoS malware. We have released this information through joint indicator bulletins (JIBs) to 129 countries. Both the DHS' Computer Emergency Readiness Team and FBI's legal attachés released JIBs to our foreign partners. These actions have enabled our foreign partners to take action and reduced the effectiveness of the botnets and the DDoS attacks.

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U.S. law enforcement and intelligence communities, along with our international and private sector partners, are making progress. Technological advancements and the Internet's expansion continue to provide malicious cyber actors the opportunity to harm U.S. national security and the economy. Given the consequences of such attacks, the FBI must be able to keep pace with this rapidly developing and diverse threat. Because of this, the FY 2014 budget request includes an additional 152 positions (60 special agents, one intelligence analyst, and 91 professional staff) and \$86.6 million to help address this threat.



United States Secret Sevice

In their 5 year strategic plan the US Secret Service stated: As a result of technological advancements, electronic and financial crimes transcend national borders more fluidly than ever before. A June 2005 round table discussion by the Payments System Development Committee of the Federal Reserve System stated that:

"...the difficulties in investigating and prosecuting Internet fraud cases are often exacerbated in international cases because, at times, the necessary cooperation with...

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United States Secret Sevice

...foreign law enforcement agencies adds additional complexity to an investigation. This is a growing concern because of the international scale of the Internet and increasing amounts of fraud that originate outside of the United States."

"Strategic Objective 1.2: Reduce the amount of financial losses resulting from electronic crimes, financial crimes, computer crimes, compromised payment systems, identity theft and other types of financial crimes."

http://www.secretservice.gov/usss_strategic_plan_2008_2013.pdf

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Internet Crime Complaint Center (IC3)

The IC3 was established as a partnership between the Federal Bureau of Investigation (FBI) and the National White Collar Crime Center (NW3C) to serve as a means to receive Internet related criminal complaints and to further research, develop, and refer the criminal complaints to federal, state, local, or international law enforcement and/or regulatory agencies for any investigation they deem to be appropriate. The IC3 was intended, and continues to emphasize, serving the broader law enforcement community to include federal, as well as state, local, and international agencies, which are combating Internet crime and, in many cases, participating in Cyber Crime Task Forces.

http://www.ic3.gov/default.aspx

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Internet Crime Complaint Center (IC3)

Now in its 12th year, IC3 continues to serve as the largest single repository for Internet-related complaints. IC3 also conducts research and compiles criminal activity information for referrals to law enforcement agencies. In 2012, consumers filed 289,875 complaints detailing a variety of scams and frauds for a total adjusted dollar loss of \$522 million¹. On average, consumers who reported a financial loss were defrauded \$4,543.

¹FBI IC3 Unit staff reviewed for validity all complaints that reported a loss of more than \$100,000. FBI Analysts also converted losses reported in foreign currencies to dollars. The final amounts of all reported losses above \$100,000 for which the complaint information did not support the loss amount were excluded from the statistics.

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IC3 2012 Statistics Top Five¹ Reported Crime Types

Rank/Crime Type

- 1. FBI Impersonation Scams 28,130
- 2. Identity Theft 26,131
- 3. Advance Fee Fraud 21,133
- 4. Non-Auction Non-Delivery of Merchandise 20,090
- 5. SPAM (Misc.) 19,454

¹Complaint category statistics based on the perceptions of complainants are not typically accurate for statistical purposes. The statistics pulled from the complaints themselves are more accurate as they are categorized and grouped through the IC3 automated system. IC3 does not verify complaint data.

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Internet Crime Complaint Center



Internet Crime Complaint Center's (IC3) Scam Alerts August 13, 2013

This report, which is based upon information from law enforcement and complaints submitted to the IC3, details recent cyber crime trends and new to existing cyber scams.

SPAM CONTINUING TO CAPITALIZE ON THE FBI'S NAME

The IC3 continues to receive reports of span e-mails that use FBI titles in online fraud schemes. Although there are different types and schemes, the recipients are typically notified that they are a baneficial money. The latest round of spam e-mails use the name of James Com FBI Director.

DHS NOTES RISE IN BRUTE-FORCE ATTACKS AGAINST NATURAL GA SCMagazine featured the following article on July 1, 2013

Hackers using some 50 IP addresses have attempted to infiltrate t networks belonging to natural gas companies, according to a recent from the Industrial Control Systems Cyber Emergency Response Team



Public Service Announcement

Prepared by the
Internet Crime Complaint Center (IC3)



SPAM E-MAILS CONTINUE TO UTILIZE FBI OFFICIALS' NAMES, TITLES, IN ONLINE FRAUD SCHEMES

Various government agencies and high ranking government officials have been the target of previous spam attacks. In their attempts to lure victims, criminals continue to explore new avenues to obtain their goal.

A new version of the spam e-mail uses the names of FBI officials along with the names of specific units within the FBI. The e-mail alerts the recipient that two "Trunk Boxes" containing a large sum of money were intercepted at an international airport. The funds are allegedly from the Office of the Ministry of Finance, Federal Government of Nigeria.

The boxes contain documents bearing the recipient's name as the owner of the funds. The fraudsters advise an additional document called the 'Diplomatic Immunity Seal of Delivery's needed to protect the recipient from violating the Pation CAC. The recipient required to contact the fraudsters, via email, for instructions to obtain the document. The fraudsters further inform the recipient of the consequences if they fall to comply and are told not to contact any bank in Africa, or any other institution.

DO NOT RESPOND. THESE E-MAILS ARE A HOAX.

Neither government agencies nor government officials send unsolicited e-mail to consumers. United States government agencies use the legal process to contact individuals.

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National White Collar Crime Center (NW3C)

In July 2012, NW3C announced a strategic partnership with X1 Discovery, Inc. to provide support and training for Internet and social media investigations. X1 produces and sells X1 Social Discovery, an industry-leading software product that serves as an investigative tool for forensically gathering evidence from social media sites. The X1 product is designed to help combat child exploitation, financial fraud, drug trafficking and other illegal activities involving the direct or indirect use of social media and the Internet.

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Not just the US but foreign governments are shifting their focus and resources to cybercrime.

What types of cybercrime are most prevalent?

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Internet Crime Schemes

Current and ongoing Internet trends and schemes identified by the Internet Crime Complaint Center (IC3):

- 1. Auction Fraud
- 2. Auction Fraud Romania
- 3. Counterfeit Cashier's Check
- 4. Credit Card Fraud
- 5. Debt Elimination
- 6. Parcel Courier Email Scheme
- 7. Employment/Business Opportunities
- 8. Escrow Services Fraud
- 9. Identity Theft

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Target breach:

40 million credit and debit cards were stolen – even though stolen PIN codes were encrypted note that you can crack more than 10 percent of random PINs by dialing in 1234. Expanding a bit, 1234, 0000, and 1111, make up about 20 percent.

See http://www.popsci.com/technology/article/2012-09/infographic-day-fastest-way-crack-4-digit-pin-number

Affordable Care Act (Obamacare) fraud:

Some Obamacare navigators—taxpayer-funded workers who were meant to help Americans wade through the insurance exchanges and buy health insurance—have been giving Americans misinformation and in some instances encouraging Americans to commit fraud, according to a House Oversight and Government Reform Committee that was released today.

See http://blog.heritage.org/2013/12/16/obamacare-navigators-encourage-fraud-safe-private-information-report-warns/

Internet Crime Schemes

- 10. Internet Extortion
- 11. Investment Fraud
- 12. Lotteries
- 13. Nigerian Letter or "419"
- 14. Phishing/Spoofing
- 15. Ponzi/Pyramid
- 16. Reshipping
- 17. Spam
- 18. Third Party Receiver of Funds

http://www.ic3.gov/crimeschemes.asny

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Auction Fraud

Auction fraud involves fraud attributable to the misrepresentation of a product advertised for sale through an Internet auction site or the non-delivery of products purchased through an Internet auction site.

Consumers are strongly cautioned against entering into Internet transactions with subjects exhibiting the following behavior:

- The seller posts the auction as if he resides in the United States, then responds to victims with a congratulatory email stating he is outside the United States for business reasons, family emergency, etc.
- Similarly, beware of sellers who post the auction under one name, and ask for the funds to be transferred to another individual.

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Auction Fraud (cont.)

- The subject requests funds to be wired directly to him/her via Western Union, MoneyGram, or bank-to-bank wire transfer. By using these services, the money is virtually unrecoverable with no recourse for the victim.
- Sellers acting as authorized dealers or factory representatives in countries where there would be no such dealers should be avoided.
- Buyers who ask for the purchase to be shipped using a certain method to avoid customs or taxes inside another country should be avoided.
- Be suspect of any credit card purchases where the address of the card holder does not match the shipping address. Always receive the card holder's authorization before shipping any products.

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Tips for avoiding Auction fraud:

- 1. Before you bid, contact the seller with any questions you have.
- 2. Review the seller's feedback.
- 3. Be cautious when dealing with individuals outside of your own country.
- 4. Ensure you understand refund, return, and warranty policies.
- 5. Determine the shipping charges before you buy.
- 6. Be wary if the seller only accepts wire transfers or cash.
- 7. If an escrow service is used, ensure it is legitimate.
- 8. Consider insuring your item.
- 9. Be cautious of unsolicited offers.

Auction Fraud — Romania

Auction fraud is the most prevalent of Internet crimes associated with Romania. The subjects have saturated the Internet auctions and offer almost every in-demand product. The subjects have also become more flexible, allowing victims to send half the funds now, and the other half when the item arrives.

The auctions are often posted as if the seller is a United States citizen, then the subject advises the victim to send the money to a business partner, associate, sick relative, a family member, etc., usually in a European country. The money is usually transferred via MoneyGram or Western Union wire transfer. The Internet Crime Complaint Center has verified in order to receive funds via Western Union, the receiver must provide the complete

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<u>Auction Fraud — Romania (cont.)</u>

information of the sender and the receiver's full name and address. The funds can be picked up anywhere in the world using this information. There is no need to provide the money transfer control number (MTCN) or the answer to any secret question, as many subjects have purported to the victims.

Money sent via wire transfer leaves little recourse for the victim.

The most recent trend is a large increase in bank-to-bank wire transfers. Most significantly, these wire transfers go through large United States banks and are then routed to **Bucharest**, **Romania or Riga**, **Latvia**.

Similarly, the sellers also occasionally direct the victims to pay using phony escrow services.

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Wire transfer never-evers!

http://www.westernunion.com/sites/us/consumer-protection/KnowledgeCenter.page

Lower your chances of falling victim to fraud by checking out these eight things you should never do when using a money transfer service.

- 1. Never send money to people you haven't met in-person.
- 2. Never send money to pay for taxes or fees on lottery or prize winnings.
- 3. Never use a test question as an additional security measure to protect your transaction.
- 4. Never provide your banking information to people or businesses you don't know.
- 5. Never send money in advance to obtain a loan or credit card.
- 6. Never send money for an emergency situation without verifying that it's a real emergency.
- 7. Never send funds from a check in your account until it officially clears—which can take weeks.
- 8. Never send a money transfer for online purchases.

Counterfeit Cashier's Check

The counterfeit cashier's check scheme targets individuals that use Internet classified advertisements to sell merchandise. Typically, an interested party located outside the United States contacts a seller. The seller is told that the buyer has an associate in the United States that owes him money. As such, he will have the associate send the seller a cashier's check for the amount owed to the buyer.

The amount of the cashier's check will be thousands of dollars more than the price of the merchandise and the seller is told the excess amount will be used to pay the shipping costs associated with getting the merchandise to his location. The seller is instructed to deposit the check, and as soon as it clears, to wire the excess funds back to the buyer or to another associate

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Counterfeit Cashier's Check (cont.)

identified as a shipping agent. In most instances, the money is sent to locations in West Africa (Nigeria).

Because a cashier's check is used, a bank will typically release the funds immediately, or after a one or two day hold. Falsely believing the check has cleared, the seller wires the money as instructed.

In some cases, the buyer is able to convince the seller that some circumstance has arisen that necessitates the cancellation of the sale, and is successful in conning the victim into sending the remainder of the money. Shortly thereafter, the victim's bank notifies him that the check was fraudulent, and the bank is holding the victim responsible for the full amount of the check.

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Tips for avoiding Counterfeit Cashier's Check fraud:

- 1. Inspect the cashier's check.
- 2. Ensure the amount of the check matches in figures and words.
- 3. Check to see that the account number is not shiny in appearance.
- 4. Be watchful that the drawer's signature is not traced.
- 5. Official checks are generally perforated on at least one side.
- 6. Inspect the check for additions, deletions, or other alterations.
- 7. Contact the financial institution on which the check was drawn to ensure legitimacy.
- 8. Obtain the bank's telephone number from a reliable source, not from the check itself.
- 9. Be cautious when dealing with individuals outside of your own country.

Credit Card Fraud

The Internet Crime Complaint Center has received multiple reports alleging foreign subjects are using fraudulent credit cards. The unauthorized use of a credit/debit card, or card number, to fraudulently obtain money or property is considered credit card fraud. Credit/debit card numbers can be stolen from unsecured websites, or can be obtained in an identity theft scheme.

Note: Target was just one of about 600 publicly disclosed data breaches in 2013. "Any retailer can be hit," said Al Pascual, a senior analyst for security risk and fraud at Javelin Strategy and Research. "People need to protect themselves because sooner or later they're going to be affected, regardless of where they shop."

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Tips for avoiding Credit Card fraud:

- 1. Ensure a site is secure and reputable before providing your credit card number online.
- 2. Don't trust a site just because it claims to be secure.
- 3. If purchasing merchandise, ensure it is from a reputable source.
- 4. Promptly reconcile credit card statements to avoid unauthorized charges.
- 5. Do your research to ensure legitimacy of the individual or company.
- 6. Beware of providing credit card information when requested through unsolicited emails.

Debt Elimination

Debt elimination schemes generally involve websites advertising a legal way to dispose of mortgage loans and credit card debts. Most often, all that is required of the participant is to send \$1,500 to \$2,000 to the subject, along with all the particulars of the participant's loan information and a special power of attorney authorizing the subject to enter into transactions regarding the title of the participant's homes on their behalf. The subject then issues bonds and promissory notes to the lenders that purport to legally satisfy the debts of the participant. In exchange, the participant is then required to pay a certain percentage of the value of the satisfied debts to the subject.

The potential risk of identity theft related crimes associated with the debt elimination scheme is extremely high because the participants provide all of their personal information to the subject.

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Tips for avoiding Debt Elimination fraud:

- 1. Know who you are doing business with do your research.
- 2. Obtain the name, address, and telephone number of the individual or company.
- 3. Research the individual or company to ensure they are authentic.
- 4. Contact the Better Business Bureau to determine the legitimacy of the company.
- 5.Be cautious when dealing with individuals outside of your own country.
- 6.Ensure you understand all terms and conditions of any agreement.
- 7.Be wary of businesses that operate from P.O. boxes or mail drops.
- 8. Ask for names of other customers of the individual or company and contact them.
- 9.If it sounds too good to be true, it probably is.

Parcel Courier Email Scheme

The Parcel Courier Email Scheme involves the supposed use of various National and International level parcel providers such as DHL, UPS, FedEx and the USPS. Often, the victim is directly emailed by the subject(s) following online bidding on auction sites. Most of the scams follow a general pattern which includes the following elements:

- The subject instructs the buyer to provide shipping information such as name and address.
- The subject informs the buyer that the item will be available at the selected parcel provider in the buyer's name and address, thereby, identifying the intended receiver.
- The selected parcel provider checks the item and purchase documents to guarantee everything is in order.
- The selected parcel provider sends the buyer delivery notification verifying their receipt of the item.

Parcel Courier Email Scheme (cont.)

- The buyer is instructed by the subject to go to an electronic funds transfer medium, such as Western Union, and make a funds transfer in the subject's name and in the amount of the purchase price.
- After the funds transfer, the buyer is instructed by the subject to forward the selected parcel provider the funds transfer identification number, as well as their name and address associated with the transaction.
- The subject informs the buyer the parcel provider will verify payment information and complete the delivery process.
- Upon completion of delivery and inspection of the item(s) by the receiver, the buyer provides the parcel provider funds transfer information, thus, allowing the seller to receive his funds.

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Tips for avoiding Parcel Courier fraud:

- 1. Beware of individuals using the DHL or UPS logo in any email communication.
- 2. Be suspicious when payment is requested by money transfer before the goods will be delivered.
- 3. Remember that DHL and UPS do not generally get involved in directly collecting payment from customers.
- 4. Fees associated with DHL or UPS transactions are only for shipping costs and never for other costs associated with online transactions.
- 5. Contact DHL or UPS to confirm the authenticity of email communications received.



Employment/Business Opportunities

Employment/business opportunity schemes have surfaced wherein bogus foreign-based companies are recruiting citizens in the United States on several employment-search websites for work-at-home employment opportunities. These positions often involve reselling or reshipping merchandise to destinations outside the United States.

Prospective employees are required to provide personal information, as well as copies of their identification, such as a driver's license, birth certificate, or social security card. Those employees that are "hired" by these companies are then told that their salary will be paid by check from a United States company reported to be a creditor of the employer. This is done under the pretense that the employer does not have any banking set up in the United States.

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Employment/Business Opportunities (cont.)

The amount of the check is significantly more than the employee is owed for salary and expenses, and the employee is instructed to deposit the check into their own account, and then wire the overpayment back to the employer's bank, usually located in Eastern Europe. The checks are later found to be fraudulent, often after the wire transfer has taken place.

In a similar scam, some web-based international companies are advertising for affiliate opportunities, offering individuals the chance to sell high-end electronic items, such as plasma television sets and home theater systems, at significantly reduced prices.

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Employment/Business Opportunities (cont.)

The affiliates are instructed to offer the merchandise on well-known Internet auction sites. The affiliates will accept the payments, and pay the company, typically by means of wire transfer. The company is then supposed to drop-ship the merchandise directly to the buyer, thus eliminating the need for the affiliate to stock or warehouse merchandise. The merchandise never ships, which often prompts the buyers to take legal action against the affiliates, who in essence are victims themselves.

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Tips for avoiding Employment/Business Opportunities fraud:

- 1. Be wary of inflated claims of product effectiveness.
- 2. Be cautious of exaggerated claims of possible earnings or profits.
- 3. Beware when money is required up front for instructions or products.
- 4. Be leery when the job posting claims "no experience necessary".
- 5. Do not give your social security number when first interacting with your prospective employer.
- 6. Be cautious when dealing with individuals outside of your own country.
- 7. Be wary when replying to unsolicited emails for work-at-home employment.
- 8. Research the company to ensure they are authentic.
- 9. Contact the Better Business Bureau to determine the legitimacy of the company.



Escrow Services Fraud

In an effort to persuade a wary Internet auction participant, the perpetrator will propose the use of a third-party escrow service to facilitate the exchange of money and merchandise. The victim is unaware the perpetrator has actually compromised a true escrow site and, in actuality, created one that closely resembles a legitimate escrow service. The victim sends payment to the phony escrow and receives nothing in return. Or, the victim sends merchandise to the subject and waits for his/her payment through the escrow site which is never received because it is not a legitimate service.

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Tips for avoiding Escrow Services fraud:

- 1. Always type in the website address yourself rather than clicking on a link provided.
- 2. A legitimate website will be unique and will not duplicate the work of other companies.
- 3. Be cautious when a site requests payment to an "agent", instead of a corporate entity.
- 4. Be leery of escrow sites that only accept wire transfers or e-currency.
- 5. Be watchful of spelling errors, grammar problems, or inconsistent information.
- 6. Beware of sites that have escrow fees that are unreasonably low.

Identity Theft

Identity theft occurs when someone appropriates another's personal information without their knowledge to commit theft or fraud. Identity theft is a vehicle for perpetrating other types of fraud schemes. Typically, the victim is led to believe they are divulging sensitive personal information to a legitimate business, sometimes as a response to an email solicitation to update billing or membership information, or as an application to a fraudulent Internet job posting.

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In yesterday's (01/08/2014) Wall Street Journal an article quoted the IRS as saying "Identify Theft Grew Sharply Last Year."

Tips for avoiding Identity Theft:

- 1. Ensure websites are secure prior to submitting your credit card number.
- 2.Do your homework to ensure the business or website is legitimate.
- 3. Attempt to obtain a physical address, rather than a P.O. box or mail drop.
- 4. Never throw away credit card or bank statements in usable form.
- 5.Be aware of missed bills which could indicate your account has been taken over.
- 6.Be cautious of scams requiring you to provide your personal information.
- 7. Never give your credit card number over the phone unless you make the call.
- 8. Monitor your credit statements monthly for any fraudulent activity.
- 9. Report unauthorized transactions to your bank or credit card company as soon as possible.
- 10. Review a copy of your credit report at least once a year.

Internet Extortion

Internet extortion involves hacking into and controlling various industry databases, promising to release control back to the company if funds are received, or the subjects are given web administrator jobs. Similarly, the subject will threaten to compromise information about consumers in the industry database unless funds are received.

Internet extortion may also include threatening to reveal information or photographs of a personal nature unless specific actions are performed or payments are made.

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<u>Tips for avoiding Internet Extortion:</u>

- 1. Security needs to be multi-layered so that numerous obstacles will be in the way of the intruder.
- 2. Ensure security is installed at every possible entry point.
- 3. Identify all machines connected to the Internet and assess the defense that's engaged.
- 4. Identify whether your servers are utilizing any ports that have been known to represent insecurities.
- 5. Ensure you are utilizing the most up-to-date patches for your software.



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Investment Fraud

Investment fraud is an offer using false or fraudulent claims to solicit investments or loans, or providing for the purchase, use, or trade of forged or counterfeit securities.

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Tips for avoiding Investment fraud:

- 1. If the "opportunity" appears too good to be true, it probably is.
- 2. Beware of promises to make fast profits.
- 3. Do not invest in anything unless you understand the deal.
- 4. Don't assume a company is legitimate based on "appearance" of the website.
- 5. Be leery when responding to investment offers received through unsolicited email.
- 6. Be wary of investments that offer high returns at little or no risk.
- 7. Independently verify the terms of any investment that you intend to make.
- 8. Research the parties involved and the nature of the investment.
- 9. Be cautious when dealing with individuals outside of your own country.
- 10. Contact the Better Business Bureau to determine the legitimacy of the company.

Lotteries

The lottery scheme deals with persons randomly contacting email addresses advising them they have been selected as the winner of an International lottery. The Internet Crime Complaint Center has identified numerous lottery names being used in this scheme.

The email message usually reads similar to the following: "This is to inform you of the release of money winnings to you. Your email was randomly selected as the winner and therefore you have been approved for a lump sum payout of \$500,000.00. To begin your lottery claim, please contact the processing company selected to process your winnings."

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Lotteries (cont.)

An agency name follows this body of text with a point of contact, phone number, fax number, and an email address. An initial fee ranging from \$1,000 to \$5,000 is often requested to initiate the process and additional fee requests follow after the process has begun. These emails may also list a United States point of contact and address while also indicating the point of contact at a foreign address.

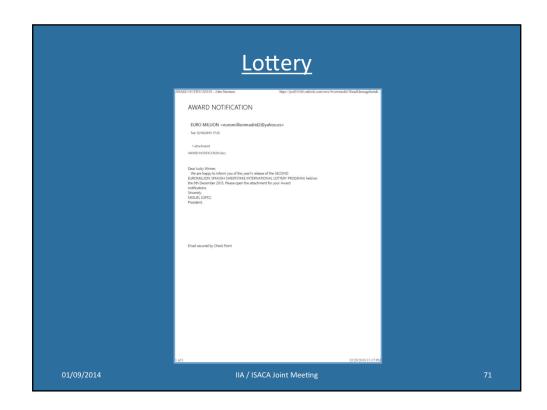
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Tips for avoiding Lottery fraud:

- 1. If the lottery winnings appear too good to be true, they probably are.
- 2. Be cautious when dealing with individuals outside of your own country.
- 3. Be leery if you do not remember entering a lottery or contest.
- 4. Be cautious if you receive a telephone call stating you are the winner in a lottery.
- 5. Beware of lotteries that charge a fee prior to delivery of your prize.
- 6. Be wary of demands to send additional money to be eligible for future winnings.
- 7. It is a violation of federal law to play a foreign lottery via mail or phone.



Nigerian Letter or "419"

Named for the violation of Section 419 of the Nigerian Criminal Code, the 419 scam combines the threat of impersonation fraud with a variation of an advance fee scheme in which a letter, email, or fax is received by the potential victim. The communication from individuals representing themselves as Nigerian or foreign government officials offers the recipient the "opportunity" to share in a percentage of millions of dollars, soliciting for help in placing large sums of money in overseas bank accounts. Payment of taxes, bribes to government officials, and legal fees are often described in great detail with the promise that all expenses will be reimbursed as soon as the funds are out of the country.

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Nigerian Letter or "419" (cont.)

The recipient is encouraged to send information to the author, such as blank letterhead stationary, bank name and account numbers, and other identifying information using a facsimile number provided in the letter. The scheme relies on convincing a willing victim to send money to the author of the letter in several installments of increasing amounts for a variety of reasons.

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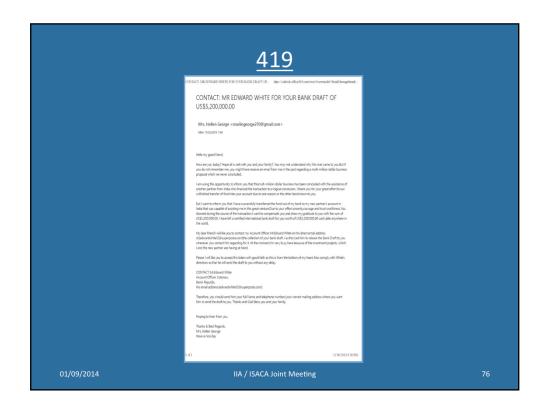
73

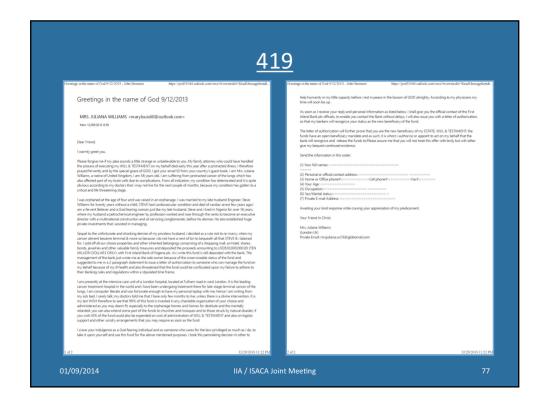
Tips for avoiding Nigerian Letter or "419" fraud:

- 1. If the "opportunity" appears too good to be true, it probably is.
- 2. Do not reply to emails asking for personal banking information.
- 3. Be wary of individuals representing themselves as foreign government officials.
- 4. Be cautious when dealing with individuals outside of your own country.
- 5. Beware when asked to assist in placing large sums of money in overseas bank accounts.
- 6. Do not believe the promise of large sums of money for your cooperation.
- 7. Guard your account information carefully.
- 8. Be cautious when additional fees are requested to further the transaction.

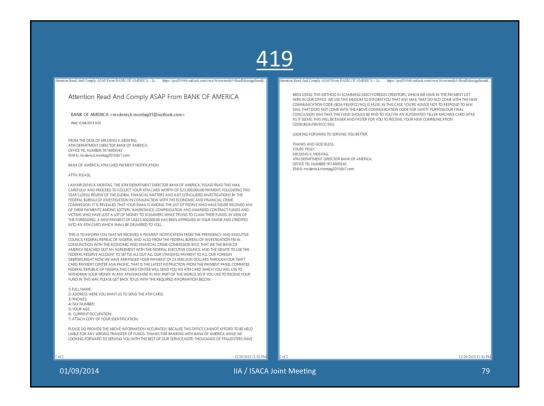


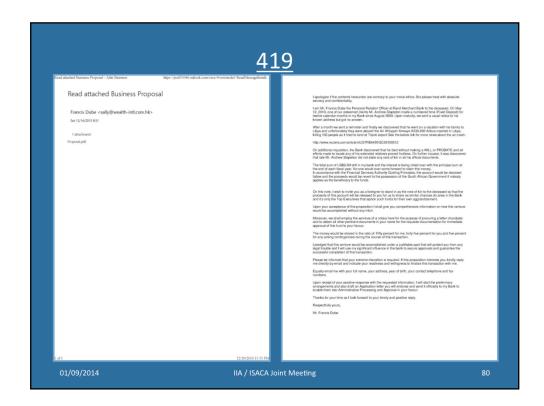












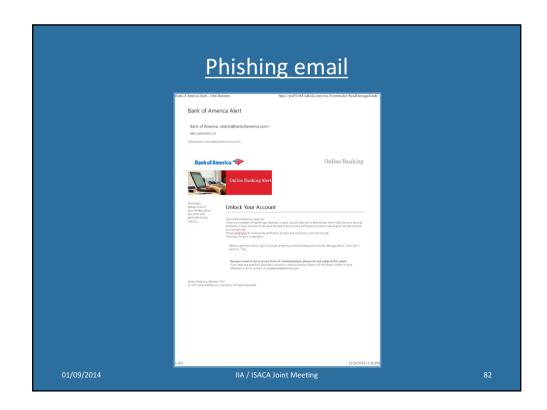
Phishing/Spoofing

Phishing and spoofing are somewhat synonymous in that they refer to forged or faked electronic documents. Spoofing generally refers to the dissemination of email which is forged to appear as though it was sent by someone other than the actual source. Phishing, often utilized in conjunction with a spoofed email, is the act of sending an email falsely claiming to be an established legitimate business in an attempt to dupe the unsuspecting recipient into divulging personal, sensitive information such as passwords, credit card numbers, and bank account information after directing the user to visit a specified website. The website, however, is not genuine and was set up only as an attempt to steal the user's information.

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Tips for avoiding Phishing/Spoofing fraud:

- 1. Be suspicious of any unsolicited email requesting personal information.
- 2. Avoid filling out forms in email messages that ask for personal information.
- 3. Always compare the link in the email to the link that you are actually directed to.
- 4. Log on to the official website, instead of "linking" to it from an unsolicited email.
- 5. Contact the actual business that supposedly sent the email to verify if the email is genuine.



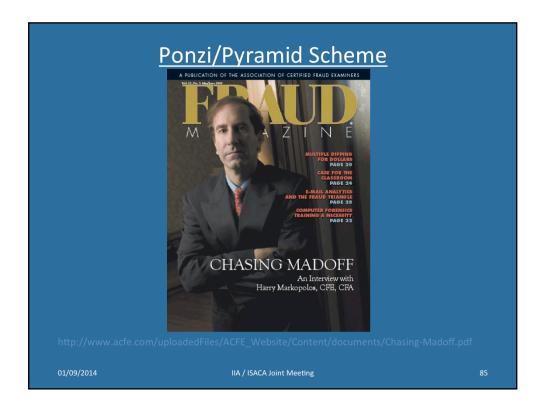


Ponzi/Pyramid Scheme

Ponzi or pyramid schemes are investment scams in which investors are promised abnormally high profits on their investments. No investment is actually made. Early investors are paid returns with the investment money received from the later investors. The system usually collapses. The later investors do not receive dividends and lose their initial investment.

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Tips for avoiding Ponzi/Pyramid Scheme fraud:

- 1. If the "opportunity" appears too good to be true, it probably is.
- 2. Beware of promises to make fast profits.
- 3. Exercise diligence in selecting investments.
- 4. Be vigilant in researching with whom you choose to invest.
- 5. Make sure you fully understand the investment prior to investing.
- 6. Be wary when you are required to bring in subsequent investors.
- 7. Independently verify the legitimacy of any investment.
- 8. Beware of references given by the promoter.

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Reshipping

The "reshipping" scheme requires individuals in the United States, who sometimes are co-conspirators and other times are unwitting accomplices, to receive packages at their residence and subsequently repackage the merchandise for shipment, usually abroad.

"Reshippers" are being recruited in various ways but the most prevalent are through employment offers and conversing, and later befriending, unsuspecting victims through Internet Relay Chat Rooms.

Unknown subjects post help-wanted advertisements at popular Internet job search sites and respondents quickly reply to the online advertisement. As part of the application process, the prospective employee is required to complete an employment

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Reshipping (cont.)

application, wherein he/she divulges sensitive personal information, such as their date of birth and social security number which, unbeknownst to the victim employee, will be used to obtain credit in his/her name.

The applicant is informed he/she has been hired and will be responsible for forwarding, or "reshipping," merchandise purchased in the United States to the company's overseas home office. The packages quickly begin to arrive and, as instructed, the employee dutifully forwards the packages to their overseas destination. Unbeknownst to the "reshipper," the recently received merchandise was purchased with fraudulent credit cards.

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Reshipping (cont.)

The second means of recruitment involves the victim conversing with the unknown individual in various Internet Relay Chat Rooms. After establishing this new online "friendship" or "love" relationship, the unknown subject explains for various legal reasons his/her country will not allow direct business shipments into his/her country from the United States. He/she then asks for permission to send recently purchased items to the victim's United States address for subsequent shipment abroad for which the unknown subject explains he/she will cover all shipping expenses.

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Reshipping (cont.)

After the United States citizen agrees, the packages start to arrive at great speed. This fraudulent scheme lasts several weeks until the "reshipper" is contacted. The victimized merchants explain to the "reshipper" the recent shipments were purchased with fraudulent credit cards. Shortly thereafter, the strings of attachment are untangled and the boyfriend/girlfriend realizes their cyber relationship was nothing more than an Internet scam to help facilitate the transfer of goods purchased online by fraudulent means.

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Tips for avoiding Reshipping fraud:

- 1. Be cautious if you are asked to ship packages to an "overseas home office."
- 2. Be cautious when dealing with individuals outside of your own country.
- 3. Be leery if the individual states that his country will not allow direct business shipments from the United States.
- 4. Be wary if the "ship to" address is yours but the name on the package is not.
- 5. Never provide your personal information to strangers in a chat room.
- 6. Don't accept packages that you didn't order.
- 7. If you receive packages that you didn't order, either refuse them upon delivery or contact the company where the package is from.

Spam

With improved technology and world-wide Internet access, spam, or unsolicited bulk email, is now a widely used medium for committing traditional white collar crimes including financial institution fraud, credit card fraud, and identity theft, among others. It is usually considered unsolicited because the recipients have not opted to receive the email. Generally, this bulk email refers to multiple identical messages sent simultaneously. Those sending this spam are violating the Controlling the Assault of Non-Solicited Pornography and Marketing (CAN-SPAM) Act, Title 18, U.S. Code, Section 1037.

Spam can also act as the vehicle for accessing computers and servers without authorization and transmitting viruses and botnets. The subjects masterminding this Spam often provide hosting services and sell open proxy information, credit card information, and email lists illegally.

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Tips for avoiding Spam and Spam-related fraud:

- 1. Don't open spam. Delete it unread.
- 2. Never respond to spam as this will confirm to the sender that it is a "live" email address.
- 3. Have a primary and secondary email address one for people you know and one for all other purposes.
- 4. Avoid giving out your email address unless you know how it will be used.
- 5. Never purchase anything advertised through an unsolicited email.

Third Party Receiver of Funds

A general trend has been noted by the Internet Crime Complaint Center regarding work-at-home schemes on websites. In several instances, the subjects, usually foreign, post work-at-home job offers on popular Internet employment sites, soliciting for assistance from United States citizens. The subjects allegedly are posting Internet auctions, but cannot receive the proceeds from these auctions directly because his/her location outside the United States makes receiving these funds difficult. The seller asks the United States citizen to act as a third party receiver of funds from victims who have purchased products from the subject via the Internet. The United States citizen, receiving the funds from the victims, then wires the money to the subject.

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Tips for avoiding Third Party Receiver of Funds fraud:

- 1. Do not agree to accept and wire payments for auctions that you did not post.
- 2. Be leery if the individual states that his country makes receiving these type of funds difficult.
- 3. Be cautious when the job posting claims "no experience necessary".
- 4. Be cautious when dealing with individuals outside of your own country.

How can you protect yourself from cybercrime?

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Protecting Yourself and Your Company

- Use common sense ask why are you being offered this "opportunity"
- Use protection use one or more antivirus or antispyware programs
- Choose your "friends" wisely don't reveal personal information to electronic "friends"
- Plan for "what if" think about the problems before they happen what would you do if...

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How to Protect Yourself from Cyber Crime Wealth Daily's Weekend Edition

http://www.wealthdaily.com/articles/how-to-protect-yourself-from-cyber-crime/3280

- 1. Keep your firewall turned on. First, lock your doors. A firewall helps protect your computer from hackers who might try to gain access to crash it, delete information, or even steal passwords or other sensitive information.
- 2. Install or update your antivirus software. Second, roll up your windows. Antivirus software is designed to prevent malicious software programs from embedding themselves on your computer. Most types of antivirus software can be set up to update automatically.
- 3. Install or update your antispyware technology. Spyware is just what it sounds like: Software that lets other people spy on you. Some spyware collects information about you without your consent; others produce unwanted pop-up ads on your web browser. Some operating systems offer free spyware protection, and inexpensive software is readily available for download on the Internet or at your local computer store.



Use Vendor Resources

- Craigslist http://www.craigslist.org/about/scams
- Ebay http://pages.ebay.com/securitycenter/index.html
- Paypal https://www.paypal.com/us/webapps/mpp/ security/suspicious-activity
- Amazon http://www.amazon.com/gp/help/customer/ display.html/ref=hp_bc_nav?ie=UTF8&nodeld=551434

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Legitimate vendors almost always have security warnings and advice on how to use their site safely and securely. Take a few minutes to review their advice. What are your options if you think you or your company is a victim of a cybercrime?

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Analyze the Situation

- Is there clear evidence of undesired, possibly criminal, behavior?
- Is information regarding the behavior in electronic form?
- Are there special considerations regarding that information being in electronic form?
- Does your company have a well-defined protocol for acting on the identified behavior?

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Remember: Only law enforcement personnel can authoritatively state a crime has been committed.

"Who Ya Gonna Call?"

• Not the Ghostbusters!



- Law Enforcement
 - Local Police
 - IC3 (http://www.ic3.gov/complaint/default.aspx)
- Legal Counsel
- Forensic Examiner

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