

# CYBER SECURITY & COMPUTER FORENSICS

One-To-One Financial  
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# Agenda

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- Introductions
- Statistics
- Volume of ESI
- Physical vs Cyber-Security
- Frauds / Perils/MNPI
- Cyber Security Recommendations
- PENETRATION TESTS
- Questions



# Statistics

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- U.S. CREDIT UNION PROFILE
- 3.5% twelve-month increase in memberships is the fastest annual advance posted since 1994.
- Credit union loan growth increased by 10.7% in the year ending September 2015. *Note: Fastest growth since 2000.*



# Statistics

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- Facebook –1.59 billion monthly active users as of December 31, 2015  
<http://newsroom.fb.com/Key-Facts>
- As of January 2015 LinkedIn operates the world's largest professional network on the Internet with more than 400 million members in over 200 countries and territories.  
<https://press.linkedin.com/about-linkedin>



# Social Media Statistics Twitter

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- Twitter – 320 million *monthly* active users
- Twitter – 500 million Tweets are sent *per day*
- *Twitter - 80% of users are on mobile devices*
- <https://about.twitter.com/company>



# Social Media Statistics: Instagram

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- Instagram – 300 million *monthly* active users
- Instagram – Most use by age group:
  - 41% - 16-24 years old
  - 35% - 25-34 years old
- There have been over 20 billion photos shared on Instagram
- <http://www.globalwebindex.net/blog/instagram-infographic>

# Statistics

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- Over 6 billion hours of video are watched each month on YouTube by more than
- 1 billion unique visitors-almost one hour for every person on earth
- 300 hours of video are uploaded to YouTube every minute
- It would take 16 years to watch a single day of video uploads
- The number of hours people are watching on Youtube each month is up 50% year after year
- [http://www.youtube.com/t/press\\_statistics](http://www.youtube.com/t/press_statistics)



# Volume of Data

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- 73% of Americans own a smartphone, up from 35% in 2011. 27% rely to some degree on a smartphone for accessing online services

*Source: [www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/](http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/)*





# Volume of Data

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- By the numbers:
  - 62% of smartphone owners have used their phone in the past year to look up information about a health condition
  - 57% have used their phone for online banking
  - 44% have used their phone to look up real estate listings or other information about a place to live
  - 43% look up information about a job
  - *Source: [www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/](http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/)*



# ESI

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- WHAT IS ESI??
- ANS: ELECTRONICALLY STORED INFORMATION
- TRANSLATION = DATA!



# Physical vs Cyber-Security

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## PHYSICAL

## CYBER

*Perimeter:*

Fences/Walls

Firewall

*Access Control :* Gates/Locks

Intrusion Detection

*Monitoring:*

Security Cameras

Intrusion Prevention



# Frauds / Perils

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- Cybercrime and cyber-espionage cost the world billions of dollars annually. Add to that loss of confidential data and intellectual property, business disruptions, reputation damage, and the cost of securing networks and systems. In addition to the financial costs, malicious cyber-activities have larger ramifications on the social fabric of our society, such as slowing the pace of innovation, distorting trade, and creating job loss. All of these factors make estimating the cost of cybercrime a big challenge.



# Frauds / Perils

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- Criminal actors are relying on computer intrusion techniques to collect Material, Non-Public Information (**MNPI**) from publicly traded companies. Such information allows criminals to accurately predict impending movements in stock, commodity, or other investment prices without requiring contact with corporate insiders. The use of MNPI allows criminal actors to potentially earn significant returns on their investments at little monetary risk. Traders seeking MNPI may hire cyber criminals who offer hacker-for-hire services via the cyber underground.



# Frauds / Perils

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- **Ransomware** is the rapidly evolving threat of malware that infects your systems, encrypts your data, and demands a ransom payment to release your files. (*Ransoms are often demanded in BitCoin.*)



# Fraud / Perils

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- The National Credit Union Administration is alerting consumers that texts they receive from an agency telephone line, 703-518-6301, asking for personal information are not coming from NCUA.
- NCUA does not request personal or financial information from consumers.
- This attempted fraud scam is called "spoofing." The perpetrators are able to mimic a telephone number to generate text messages. The texts may warn of a debit card reaching its limit or use some other trick to persuade individuals to provide personal information or go to a malicious website. Consumers should not click on links in the message, provide information to any websites referenced in the message nor attempt to conduct any financial transactions through those websites.
- More than 40 consumers around the country received text messages
- - See more at:  
<https://www.ncua.gov/newsroom/Pages/NW20150325SpoofingScam.aspx#sthash.CqgboL0k.dpuf>



# Cyber Security Recommendations

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- **PASSWORDS!!!**
  - **Consider a PASS-PHRASE**
  - **Minimum 12-Characters**
    - **Upper Case / Lower Case**
    - **Numerical / Special Characters**
    - **No Dictionary Words**
    - **No Birthdays, Pet Names, Addresses, etc.**
  - **NO STICKY NOTES!!**



# Cyber Security Recommendations

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- Access
  - Who needs access?
  - Limit/ Restrict access
    - “*Least Privileges Principal*”
    - Based on:
      - Job Function
      - Position
      - Potential exposure



# Cyber Security Recommendations

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- *PENETRATION TESTS (Pen Tests)*
- *What is a Pen Test?*
  - Penetration testing is the practice of testing a computer system, network or Web application to find vulnerabilities that an attacker could exploit.



# Cyber Security Recommendations

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- The process includes gathering information about the target before the test (reconnaissance), identifying possible entry points, attempting to break in (either virtually or for real) and reporting back the findings.
- The main objective of penetration testing is to determine security weaknesses. A pen test can also be used to test an organization's security policy compliance, its employees' security awareness and the organization's ability to identify and respond to security incidents



# Cyber Security Recommendations

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- Don't be fooled by SOCIAL ENGINEERING Tactics!
- What is Social Engineering (SE)?
  - **Social engineering** is a non-technical method of intrusion hackers use that relies heavily on human interaction and often involves tricking people into breaking normal security procedures.



# Cyber Security Recommendations

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## *Three top methods for SE:*

- Phishing: The practice of sending emails appearing to be from reputable sources with the goal of influencing or gaining personal information.
- Vishing: The practice of eliciting information or attempting to influence action via the telephone, may include such tools as “phone spoofing.”
- Impersonation: The practice of pretexting as another person with the goal of obtaining information or access to a person, company, or computer system.

<http://www.social-engineer.org/>



# Cyber Security Recommendations

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*How to avoid being a victim of SE:*

## *DON'T:*

- *Click on links within emails from unknown senders!*
- *Provide personal information over the phone!*
- *Download “videos” & “photos!”*
- *Fall for the “I’m in trouble” email/phone call!*
- *Fall for the “You’re a WINNER!” email/phone call!*



# Summary

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- Social Media (SM) is here to stay!
  - There is no bias as to who is on SM: children, parents, grandparents...
  - They are all using SM in some fashion
  - USE the PRIVACY Settings to limit your publically available information!



# Summary

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## *Electronically Stored Information (ESI) Can be a Valuable Tool*

- **WE MUST RECOGNIZE IT HAS BECOME INGRAINED IN OUR DAILY LIVES...**

*At work & play we are all leaving “digital footprints”*

**THE BENEFIT OF TRAINING CAN NOT BE UNDERESTIMATED**



# Summary

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- Don't give any personal information to unknown email senders or callers.
- If it's too good to be true...!
  - (YOU'RE A WINNER!!)



# Questions?

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# Where to Get More Information

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