

How to fight the fraud phish:
Cybersecurity and third party oversight
best practices In mortgage lending

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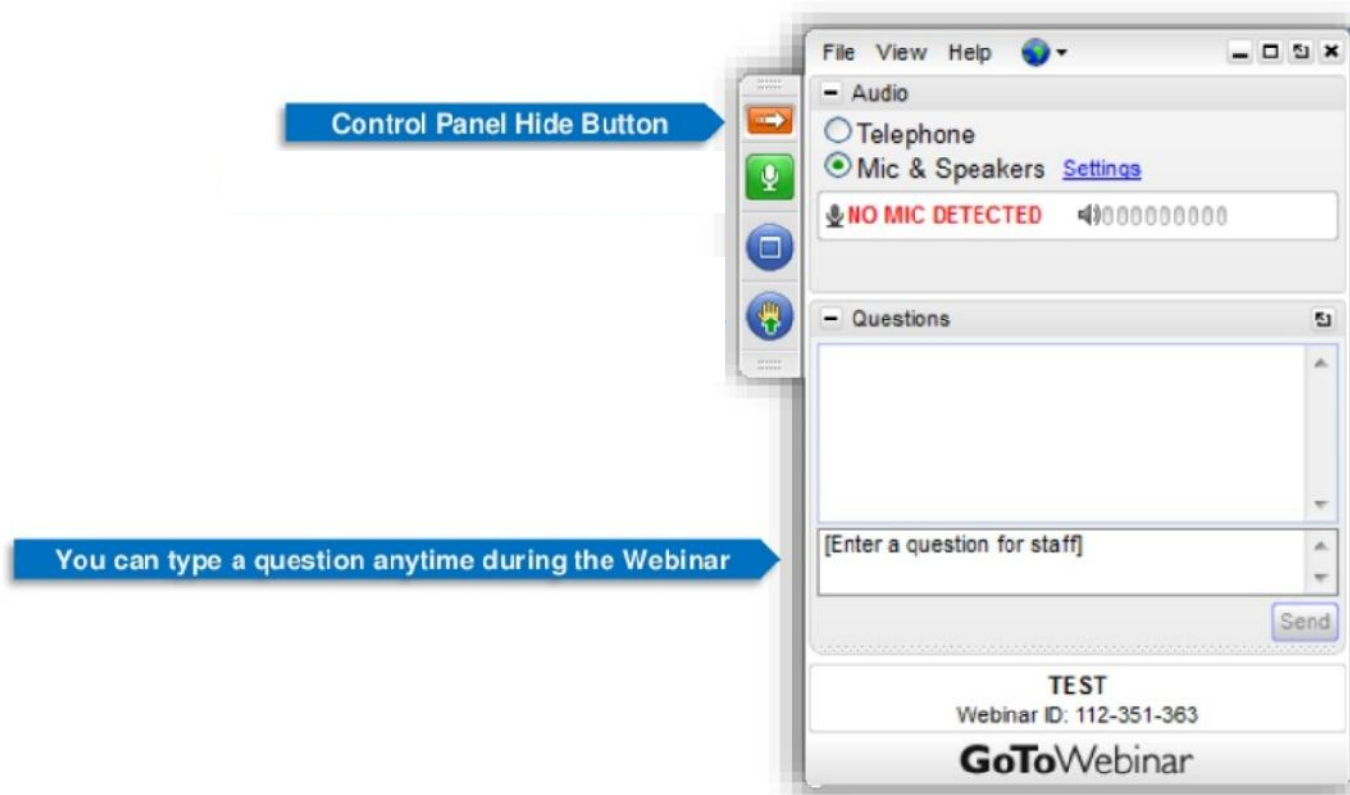
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LodeStar Software Solutions



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GoToWebinar Tools



AGENDA

- What Risks Are Lenders Focused On Today
- Risks Specific To Third Party Settlement Service Providers
- Examples of Breaches in Title and Settlement
- Where Most Cybersecurity Breaches Begin
- Best Practices For Managing Settlement Cybersecurity Risk
- Strategies And Solutions For Containing Third Party Settlement Provider Risk

LENDER RISK CONCERNS

- Risk teams are most concerned with the following categories:
 1. Cybersecurity (77%)
 2. Compliance (54%)
 3. Credit (39%)
 4. Operational (29%)
 5. Interest Rate Risk (26%)
 6. Strategic (23%)
 7. Reputational (20%)
 8. Liquidity (7%)
 9. Legal (7%)

Bank Director Survey: <http://www.bankdirector.com/issues/risk/2016-risk-practices-survey-banks-beef-up-on-cybersecurity>

SETTLEMENT IS HIGH RISK

- Access To More Non-public Information Than Just About Any Vendor Utilized By A Financial Institution
- **Cybersecurity**
 - Financial Loss
 - Wire Fraud
 - Closing Agent Fraud, Escrow Theft, Negligence
 - Legal Expense
 - Disclosure Of Consumer NPI
 - Email Phishing, Email Hacks, Wire Diversion Scams etc.
 - Identity Theft
 - Compliance With Gramm-Leach-Bliley (GLBA) Requirements
- **Compliance**
 - Lenders Must Manage Third Party Providers
 - CFPB, OCC, FDIC, NCUA, FFIEC, FTC, and GSEs - Managing Risks Of Third-party Service Provider Relationships
 - Dodd-Frank Wall Street Reform And Consumer Protection Act
 - Consumer Financial Protection Bureau (CFPB) 2012-03 Bulletin
 - Lender is Responsible and Liable for Settlement Providers



POLL QUESTION # 1

- What is the most common form of a security breach?
 - Employee Theft
 - Server Exploit
 - Email Fraud

WHAT DO THE EXPERTS* SAY?

“The starting point for breaches is usually phishing”

- ***Verizon's Data Breach Investigation Report:** Verizon in concert with more than **67 organizations**, government agencies among them.
 - Notable contributors include the U.S. Secret Service, the U.S. Emergency Computer Readiness Team, the Anti-Phishing Working Group, the National Cybersecurity and Communications Integration Center, Kaspersky Lab, Cisco Security Services and EMC.
- *Email-Based Delivery Is The Problem*



SETTLEMENT UNDER CYBERATTACK

- **Federal Trade Commission March 18, 2016** - Scammers phish for mortgage closing costs
- **National Association of Realtors, March 22, 2016** Email Scam Targeting Homebuyers Catches FTC, NAR Attention
- **The Real Deal, April 19, 2016** - You've got hacked: Attorney blamed for cyber theft of \$1.9M co-op deposit - Cybercriminals easily intercepted emails to the Manhattan couple, suit alleges
- **Housingwire April 1, 2016** - How hackers are targeting title and settlement companies
- **Housingwire March 18, 2016** - Homebuyer beware: FTC, Realtors issue warning on mortgage closing cost phishing scheme - Hackers pose as agents or title companies to steal mortgage funds

WFG REAL WORLD EXAMPLES

- **Case 1 Victim: National Title Agency in DC Metro Area**
 - Dollars at Risk: \$1.5 million in 2012
 - Nature of Offense: 33 fraudulent wires from local bank escrow account diverted funds abroad and to European crime syndicate in western U. S.
- **Case 2 Victim: Local Attorney in Northern Virginia**
 - Dollars at Risk: \$320,000 in 2015
 - Nature of Offense: Seller's email account compromised and change of wire instructions for seller's proceeds diverted seller funds to the perpetrator
- **Case 3 Victim: Regional DC Metro Agency**
 - Dollars at Risk: \$275,000 in August, 2016
 - Nature of Offense: Email account of cooperating Florida title agency and/or DC loan officer and/or borrower was compromised leading to loan proceeds going to criminal in western United States.

12. Money is wired to hackers account and disappears overseas

1. A hacker targets a company. Using social networks or other internet data, he finds employees with access to company data/systems

2. Following the social trail, he identifies other people the employee may know and that may have access to wire information

3. A fake but recognizable email address is created to impersonate a colleague or client

4. A personalized email is sent to the employee from the fake address with a link or attachment

5. The email passes the spam filter and arrives at the employee's inbox. The email is opened because they "know" the sender

6. A link is clicked or the attachment is opened

7. Opened website causes credentials to be stolen / malware / virus to be installed and to infect computer / smartphone network

8. The hacker uses the backdoor to pattern business processes and to steal information and monitor / snoop email activity

9A. Orders, Request For Information, Documents, Details Of Closing, Identities of Parties, Bank Accounts

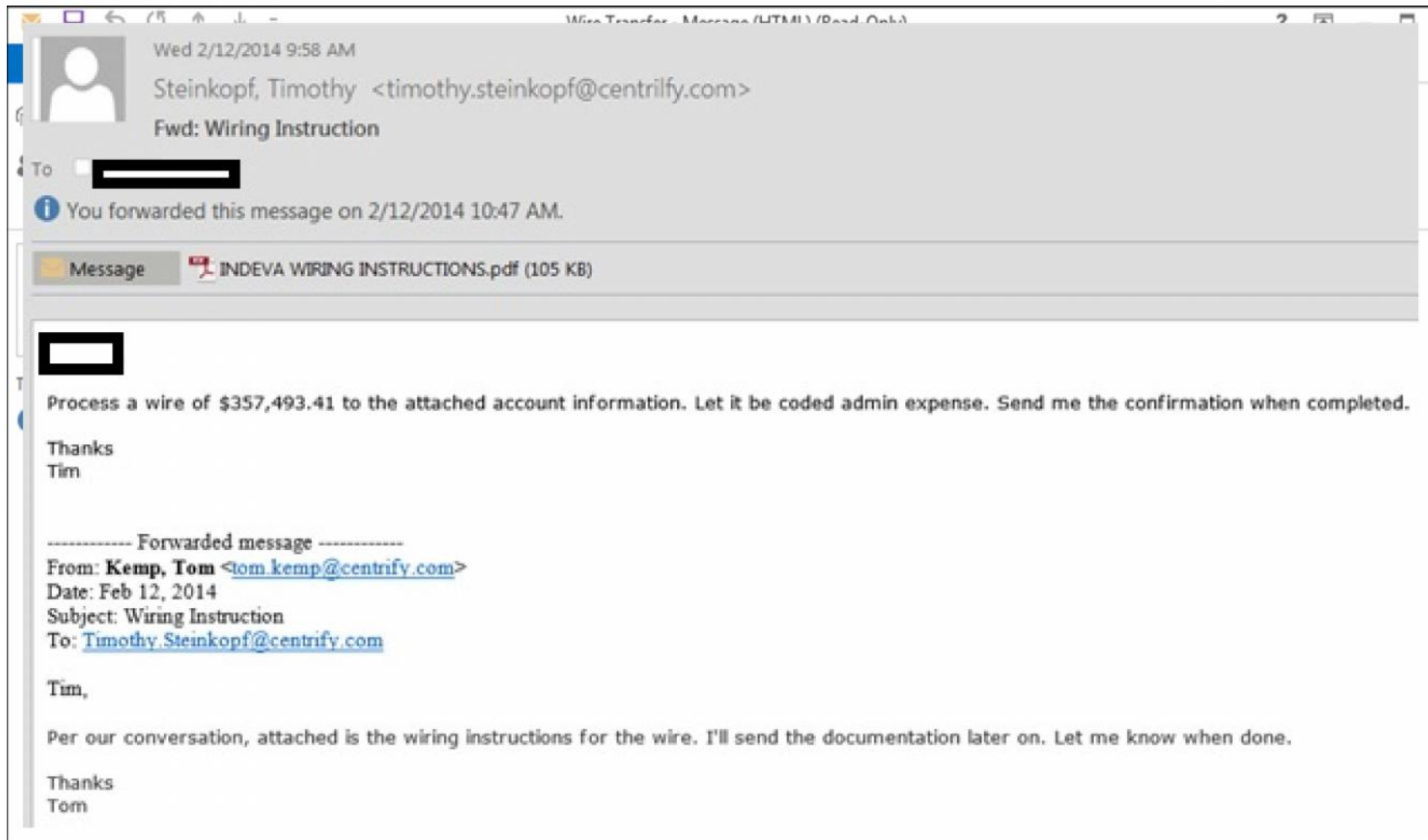
9. Hackers extract information about on-going transactions searching for opportunity to attack

10. A fake but personalized email is composed with replaced (fraudulent) wire instructions

11. Recipient believing the instructions wires funds according to the fraudulent wire instructions



EXAMPLES OF PHISHING EMAILS



PHISHING ON THE RISE

- The Anti-Phishing Working Group (APWG)
- Number of observed phishing attacks in the first quarter of 2016 hit a new high since it began tracking them in 2004
- The APWG noted a **250% increase** in phishing sites between October 2015 and March 2016

POLL QUESTION #2

- In the past year have you used un-encrypted email or fax to communicate because the email encryption system was not working or too difficult to use?
 - Yes
 - No

MOST SETTLEMENT PROCESSING USES INSECURE EMAIL

Document	Email	Secure Website
Purchase Contract, Application	✓	
Fee Information	✓	
Request for Services “Orders”	✓	✓
Title Commitment	✓	
Payoff Statements	✓	
Tax Information	✓	
Closing Protection Letter	✓	
Bank Account Information	✓	
Disclosures	✓	✓
Wire Instructions	✓	
Unsigned Closing Package		✓
Post-Close and Trailing Docs (paper)		?

HOW TO MANAGE SETTLEMENT RISK?

- Top 2 Risks - Risk teams are most concerned with the following categories:
- **Cybersecurity (77%)**
 - IT and Banking Industry Best Practice
- **Compliance (54%)**
 - Third Party Service Provider Vendor Management

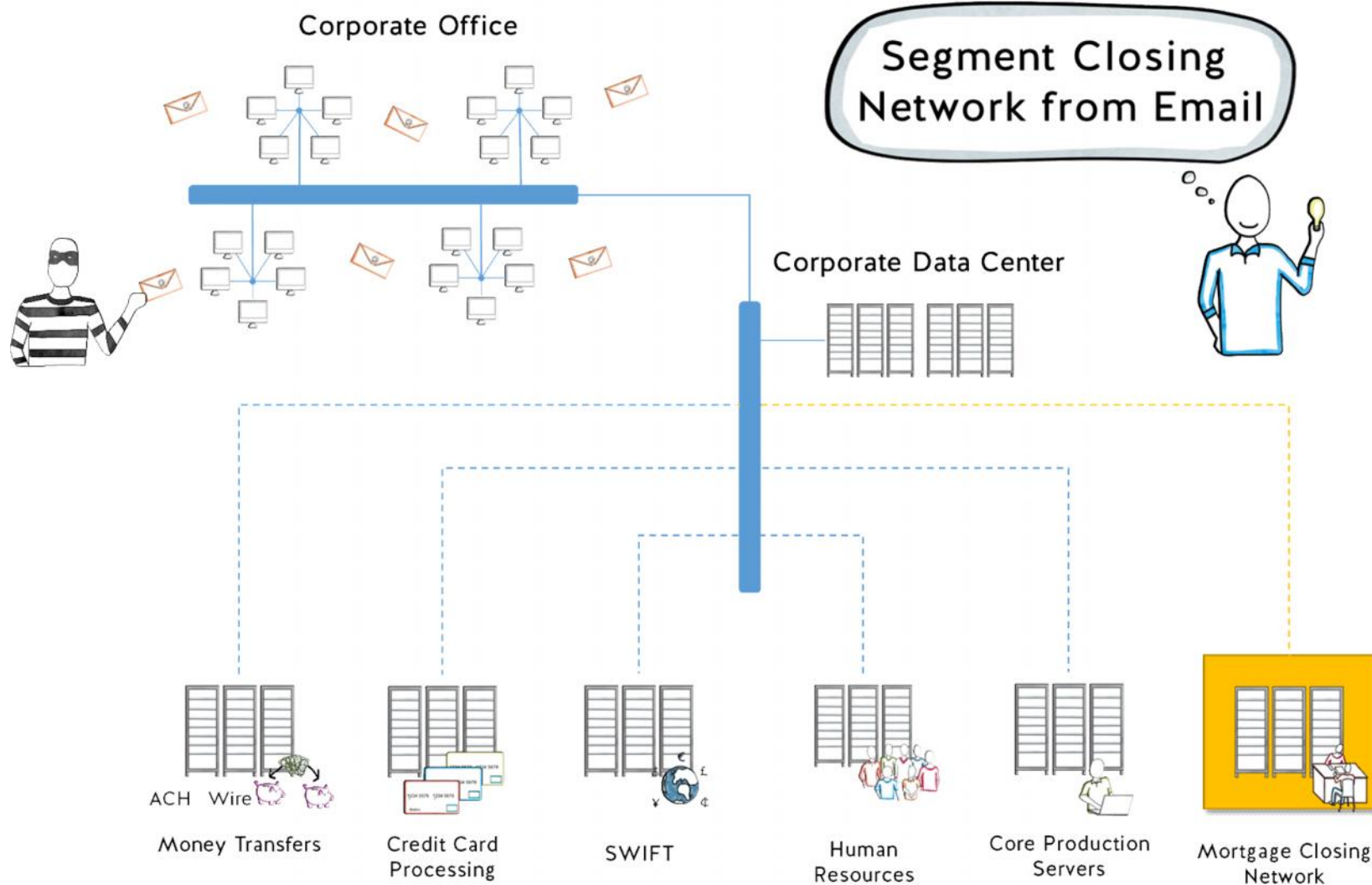


CYBERSECURITY

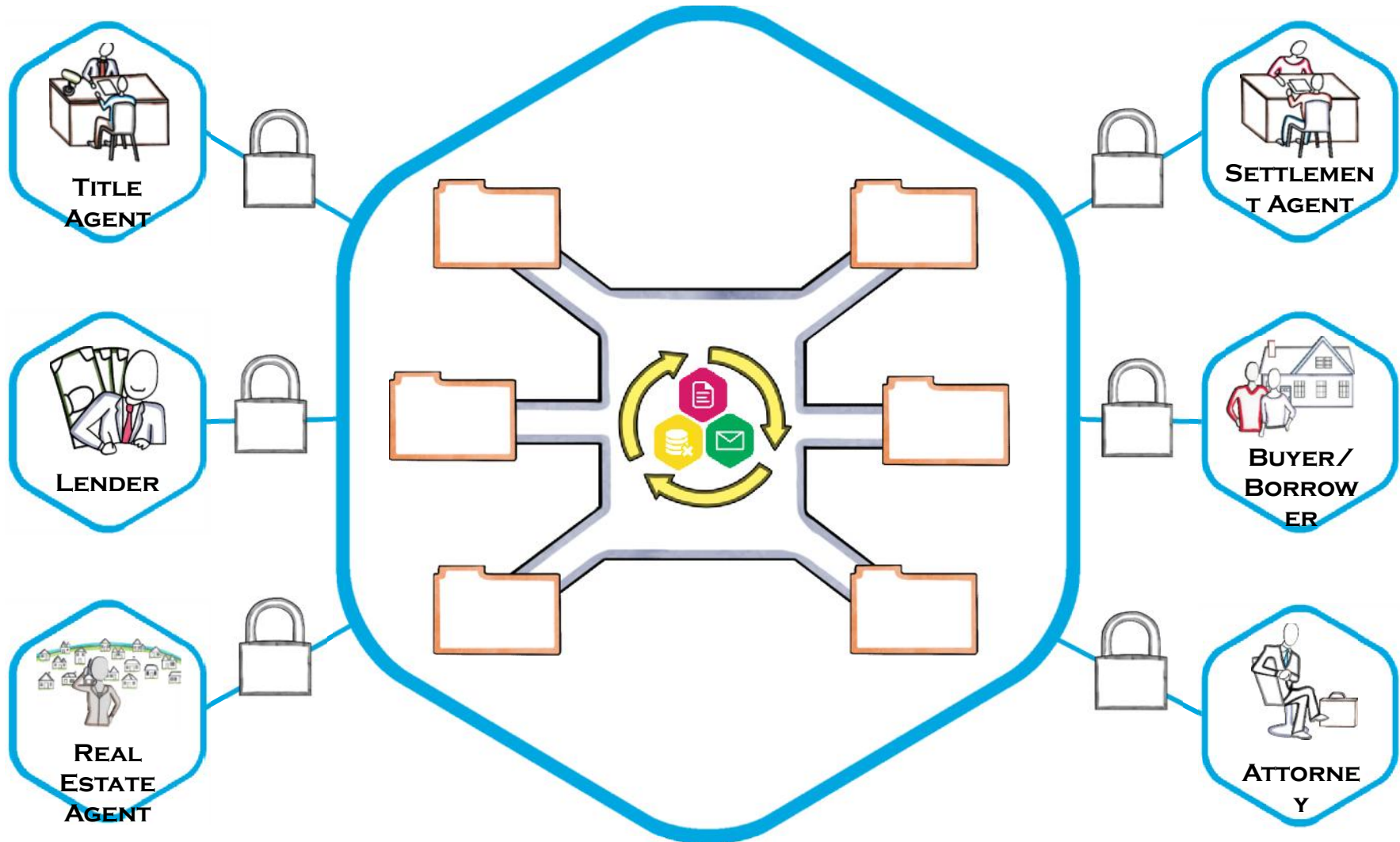
1. CYBERSECURITY – BEST PRACTICE

- Verizon's Data Breach Investigation Report - Cybersecurity Best Practice:
 - *Protect networks by “SEGMENTING THE NETWORK”*
- Lenders Already Segment Some Of Their Networks
 - Wire Desk
 - Core Production Servers e.g., Loan Origination System
 - Credit Card Processing
 - Web Point of Sale
 - Money transfers - SWIFT and ACH
 - Human Resources
- Why Not Closing Information?

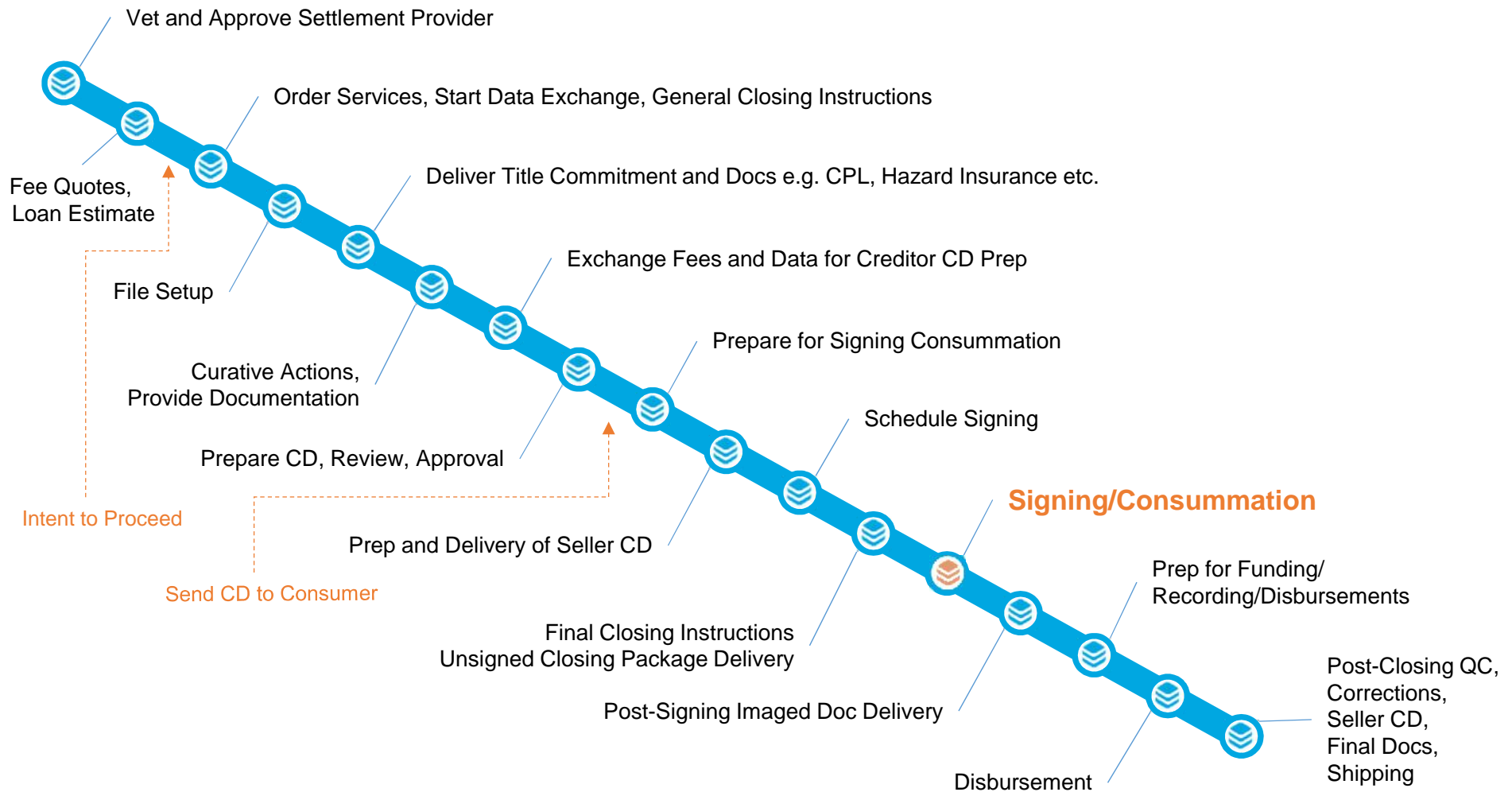
MUST SEGMENT SETTLEMENT INFORMATION NETWORK



ALL PARTIES ON SAME SEGMENTED NETWORK



MUST SECURE ALL STEPS IN CLOSING PROCESS





Compliance

2. Compliance –Management Strategies

Systemic Approach

- **Provide** Segmented Network Access To Your Providers and Vendors

Piecemeal Approach

- **Verify and Monitor** Each Provider
- Let Providers and Vendors Choose Cybersecurity Method and Systems
- Ongoing Monitoring
 - Assess Capability
 - Verify
 - Actual Use
 - Monitor

SEGMENTED NETWORK SYSTEM – WHAT TO LOOK FOR

- Basic Features
 - Document Delivery
 - Data File Delivery Using Industry Standard Formats e.g., UCD
 - Secure Message/Communication
 - Bi-directional Exchanges
- Secure Full Mortgage Closing Cycle
 - New Order Placement
 - Pre-close Processing Documents
 - Unsigned Closing Package
 - Post-signing Imaged File Delivery
 - Final Docs
- Extensible To 4th And 5th Party Providers e.g., Due Diligence Firms, Warehouse Lenders, Realtors®, Signing Agents
- Secure All Touch Points
 - Integrations With Systems, Websites, Ordering Websites, Calculators
- Embed Directly Into Production Systems



EXAMPLES

FEE QUOTING AND SECURE TITLE ORDER

LOAD
Print
Download Fees
Order Title

Closing Cost Details
Rounded

Loan Costs

A. Origination Charges	\$0
B. Services You Cannot Shop For	\$0
C. Services You Can Shop For	\$1,267
Title- Closing Fee	\$500
Title- Courter Fee	\$35
Title- Exam Fee	\$100
Title- Lender's Title Policy	\$590
Title- Secure Delivery Fee	\$18
Title- Wire Fee	\$24
D. TOTAL LOAN COSTS	\$1,267

Other Costs

E. Taxes and Other Government Fees	\$3,183
Recording Fees and Other Taxes	\$120
Transfer Taxes	\$3,063
F. Prepays	\$0
Homeowner's Insurance Premium(months)	\$0
Mortgage Insurance Premium(months)	\$0
Prepaid Interest (per day for days @)	\$0
Property Taxes (months)	\$0
G. Initial Escrow Payment as Closing	\$0
Homeowner's Insurance per month for mo.	\$0
Mortgage Insurance per month for mo.	\$0
Property Taxes per month for mo.	\$0
H. Other	\$648
Title- Owner's Title Policy(optional)	\$648

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NETWORK ACCESS VIA SECURE ORDER DELIVERY



Loan Estimate

Seller's Net Sheet

Order Title

Log Out

Order Title

Closing Bridge

State

AL

County

Township

Transaction

Borrower Name

Property address

Sales price

\$200,000

Loan Amount

\$200,000

Contact Name

Contact Email

Specific Instructions/ Mortgage Clause:

Select Files (Drag & Drop Supported)

File extensions accepted: Doc, Docx, PDF

NETWORK ACCESS VIA BROWSER: FILE DELIVERY, DATA DELIVERY, MESSAGING

The screenshot displays the ClosingBridge web application interface. The browser address bar shows the URL <https://app.beespath.com/View/Organization.aspx>. The page header includes the BeesPath logo, the tagline "Secure communications, simplified.", and the ClosingBridge logo. The user's name, "Reed, Jeremy", is visible in the top right corner.

The main content area is divided into several sections:

- Folder:** Displays loan information for Loan # 100237, located at 1852 E Brook Ln, Idaho Falls, ID 83403. The loan is managed by Mark Lewis (B) and Blake Martins (S). The status is "New".
- Files:** A list of documents associated with the loan, including:
 - ALTA Settlement Statement_v1.pdf (248 kB, 9/29/2015 8:43 AM)
 - Title Commitment - Prelim.pdf (16 kB, 9/28/2015 11:50 PM)
 - Closing Disclosure_v2.xml (94 kB, 9/28/2015 11:46 PM)
 - Closing Disclosure v2.pdf (117 kB, 9/28/2015 11:46 PM)
 - Closing Disclosure v1.pdf (62 kB, 9/28/2015 11:40 PM)
 - Title Order.pdf (84 kB, 9/4/2015 4:06 AM)
- Messages:** A list of messages related to the loan, including:
 - A message from amy to Jeremy regarding "ALTA Settlement Statements" (9/29/2015 8:43 AM).
 - A "PR" (Purchase Request) from josh@skycresttitle.com to jeremy@woodfordfunding.com, dated 9/28/2015 11:50 PM, requesting review and approval of attached Closing Disclosure documents.
 - A chat message from amy to Jeremy: "Can you please give me a call when you're back in office." (9/28/2015 11:48 PM).
 - A message from Jeremy to josh regarding "Updated Loan Terms" (9/28/2015 11:47 PM).
 - A chat message from josh to Jeremy: "The loan terms have changed. I am sending you an update" (9/28/2015 11:45 PM).
 - A message from josh to matt regarding a "New Order for Lewis Family" (9/28/2015 11:40 PM).
 - A message from Jeremy to amy regarding a "New Order for Lewis Family" (9/4/2015 4:08 AM).

NETWORK INTEGRATED AND EMBEDDED INTO PRODUCTION SYSTEM

The screenshot displays the EasyCDF software interface. The main window title is 'EasyCDF (Untitled)'. The menu bar includes 'File', 'Tools', 'Modules', and 'Help/Activate'. The 'BeesPath' menu is open, showing options: 'New Closing Disclosure from BeesPath Folder', 'Assign Closing Disclosure to BeesPath Folder', 'Upload MISMO data to BeesPath Folder', 'Download latest MISMO data from BeesPath Folder', 'Folder Properties', and 'Launch Portal'. The 'Closing Disclosure' form is visible, with a 'Pages' sidebar on the left containing 'Page 1' through 'Page 5'. The form fields include: 'Closing Date' (6/6/2016), 'Seller' (BeesPath Test), 'Loan#' (0.00), 'Created By' (empty), 'Status' (Final), 'Date Issued' (6/6/2016), 'Closing Date' (6/6/2016), 'Disbursement Date' (6/6/2016), 'Settlement Agent' (BeesPath Test), 'File No.' (empty), 'Property' (empty), 'City' (empty), 'State' (empty), 'Zip' (empty), 'Loan Term' (0 Years & 0 Months), 'Purpose' (Purchase), 'Product' (empty), 'Loan Type' (Conventional, FHA, VA, Other), 'Loan ID#' (empty), 'MIC#' (empty), and 'Loan Terms' (Can this amount change after closing?).

SUMMARY

- What Risks Settlement Agents Should Focus On Today
 - Cybersecurity
 - Vendor Risk Management
- Where Most Cybersecurity Breaches Begin
 - Phishing
- Best Practices For Managing Settlement Cybersecurity Risk
 - Segment The Network, Minimize Email Use
 - Embed Network Into Production Systems
- Strategy For Managing Third Party Vendor and Provider Risk
 - Provide A Network To Your Vendors

QUESTIONS AND ANSWERS

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