ATM ATTACKS AND DEFENSES

Talk About Payments Webinar

November 3, 2022

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WEBINAR LOGISTICS

- Ask a question
  - Click the Ask Question button in the webinar platform and enter question

- Technical issues – please use the Chat box to report any issues and we will try to assist

- Survey - A request will be sent immediately after end of webinar, please provide feedback

- Post Webinar
  - Webinar is being recorded
  - Recording, presentation deck and transcript will be posted on the Retail Payments Risk Forum website within a week: https://www.atlantafed.org/rprf.aspx

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AGENDA

1. Introductions
2. Attacks against Personnel
3. ATM Cyber Fraud
4. Brute Force Attacks
5. Audience Q&A
A global trade association of over 11,000 members
− ATMIA originated in the U.S. which is still the largest of our nine regions

- An extensive library of Best Practice manuals
- Compliance monitoring services
- ATMIA Academy; e-training and certification
- Managing the industry’s NextGen ATM initiative

- Industry advocacy
- Annual security survey
- Working committees focused on security and compliance
- A leadership role in the industry regarding payments and financial self-service

- Broad industry constituency
  - Financial institutions
  - ISO/IAD
  - Manufacturers
  - EFT networks
  - Payment processors
  - And many others . . .
LOOMIS

Loomis Armored USA
- Loomis Employees – 10,368
- Loomis Routes Deployed 2,160
- Loomis ATMs Serviced – 106,285 in 7,715 Cities & Towns
- Loomis Annual touches of ATMs – 5,646,976

ATM External Threats
- Burglary
- Robbery
- Skimming
- Jackpotting

ATM Internal Threats
- Cross-Loading ATM Cassettes
- Safe Door Left Open
- Internal Theft
- Ponzi Scheme
• Serves the financial services industry specially focused on fidelity crime, fraud investigations, compliance, and risk mitigation.

• Global insurance markets leverages Lowers Risk Group’s 40+ years of industry knowledge to help companies improve their potential risk vulnerabilities and collaboratively build solutions.

• Work includes fraudulent-claims investigations, regulatory compliance audits, and BCP evaluations to cybersecurity policy development, litigation support, and due diligence.

• Our experts draw upon decades of experience and expertise to provide tailored solutions that reduce risk and improve the bottom line. These global experiences allow companies to protect people, brands, and profits.
Established in 1908

> 35,000 employees including special agents and support personnel

Headquartered in Washington DC
  - 56 field offices and more than 350 satellite offices
  - >60 international offices

Priorities include:
  - Combat significant cyber criminal activity
  - Combat significant violent crime
A NEED FOR ATM CRIME DATA AND TREND ANALYSIS

How often do you hear about ATM crimes on the news if it’s not in the immediate area?

• No ATM operator wants publicity about ATM crime
• Difficult to get info from law enforcement
• Every stakeholder wants to be prepared for the threats that they are most likely to encounter
• Trends change – and you need to be able to stay aware of how they are changing
ATMIA/ASA history of tracking and analyzing ATM crime trends

**Surveys begin**
ATMIA began conducting member surveys to identify ATM crime trends.

**The merger**
Diebold & Wincor Nixdorf merge to create Diebold Nixdorf.

**CCMIS launch**
The Crisis & Crime Management Intelligence System is launched, May 2021.

**ASA is born**
Diebold & Wincor Nixdorf found the ATM Security Association for Enhanced Technology.

**A new start**
ATMIA agrees to acquire the ASA from Diebold Nixdorf.
The first and only database that tracks and analyzes ATM crime - globally

- Available to all industry stakeholders
- Free to law enforcement
- Recorded over 14,600 crime incidents since launch in May, 2021
- Up to six levels of data detail
- Compare trends by region, by time frame, by type . . .
- Data export/import capability
FRAUD INCIDENTS BY TYPE - GLOBALLY

Displaying 74.60% of all incidents (478 intelligence reports, 10,411 incidents)

Incident Type: Fraud Incident

Global Incidents

Incidents by Type

- Cash Trapping: 43.4%
- Card Theft: 14.7%
- Skimming & Card Data Compromise: 7.4%
- Transaction Reversal Fraud: 1.536%
- Dispenser Jackpotting: 1.0%
- Other type of ATM Fraud Attack, please...
INCIDENTS BY TYPE – U.S. MARKET

Displaying 13.26% of all incidents (1,382 intelligence reports, 1,851 incidents)

Incidents by Country (United States)

Incidents by Type

- Fraud: 23%
- Physical Attack: 77%
Displaying 3.05% of all incidents (258 intelligence reports, 425 incidents)

Incidents by Country (United States)

Incidents by Type:
- Skimming & Card Data Compromise: 9.9%
- Dispenser Jackpotting: 87.5%
- Fraudulent Deposit: 115
- Other type of ATM Fraud Attack, please specify
- ATM Funds Transfer & Bill Payment Fraud

Country: United States
Incident Type: Fraud Incident
Physiological Attack Incidents by Type – U.S. Market

Displaying 10.22% of all incidents (1,124 intelligence reports, 1,426 incidents)

Incidents by Country (United States)

Incidents by Type

- Theft of the ATM: 67.3%
- Theft from the ATM: 30.2%
- Damage to fascia, cabinet compromise
- Cash In Transit (CIT)
- Other type of Physical attack, please specify
ATM PERSONNEL ATTACKS
PERSONNEL ATTACKS

• Targets
  - CIT Carrier Replenishing ATM
  - FLM Provider servicing ATM
  - Customer’s Personnel conducting Deposit Pulls

• Location
  - Drive Up ATM
  - ATM in Standalone Kiosk

• Frequency
  - 202 Attacks against CIT Carriers in past five years
  - 107 occurred at ATMs vs 29 at Banks
  - High level of violence – 37 Attempted Homicides with four CIT employees killed & two bystanders killed
ARMED ATTACKS AT ATM
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• Counter Measures – CIT Carriers
  - High Security Level Vehicles
  - Focused Anti-Robbery Training
  - Specific Location Approach / Parking Protocols
  - Reduce Exposure time at ATM
  - Exchange Currency in secure environments when possible

• Counter Measures – ATM Owner
  - Reduce steps needed to service / settle ATM
  - Ensure good CCTV coverage at and around ATM
  - Monitored Alarms in Place with Hold-Up Feature
ATM PHYSICAL ATTACKS

Gas Attack – Trend in EU
COUNTER MEASURES TO ATM HOOK & CHAIN ATTACK

Bollards & Security Gate deterrent system with remote monitoring
INTERNAL ATM THREATS

• Unauthorized Access to safe - Counter Measures
  - Auditable locks utilizing encrypted one-time use combination
  - Good CCTV coverage of ATM
  - Monitored Alarm System

• Cross Loaded ATMs - Counter Measures
  - Properly labeled Cassettes/and Cassette Slots by FLM
  - If possible, limit number of denominations used in ATM

• Internal Theft - Counter Measures
  - Auditable locks utilizing encrypted one-time use combination.
  - Tri-Party Shared Access Contract / Investigation protocols
  - Random Audits of ATM’s / Random Swaps of ATM Service Crews
ATM CYBER FRAUD
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The Next Form of Bank Robbery

- Cash Trap
- Skimming
- Transaction Reversal
- Jackpotting

ATM CYBER FRAUD

- Deposit Trapping
- Fraudulent Deposit
- Mobile App Compromise
WHY CYBER?

ATM Cyber
Theft Advantages

- No Weapons Needed
- Easy to Procure Tools
- No Interaction with People
- Property Crime
- Speed
- Hard to Trace
GROWING EXPONENTIALLY

Cyber Fraud Increase

- 1298% Increase Between 2019-2020
- 312% Increase Between 2020-2021
- 2022 Has 3534 Events Up Through April
- Globally, fraud accounted for 92% of crime incidents and physical attacks, 8% in Q1, 2022.

- South Africa has 67% physical and 33% Cyber fraud
- Asia has 24% physical and 76% Cyber fraud
- Asia Pacific has 75% physical and 25% Cyber fraud
- Europe has 1.5% physical and 98.5% Cyber fraud
- North America had 73% physical and 27% Cyber fraud
  - Incidents are self-reported

- Card Theft 24.7%
- Skimming 16.4%
- Cash Trapping 57.7%
- Jackpotting 0.3%
- Transaction Reversal 0.3%
- Fraudulent Deposits 0.6%

*Data driven from ATM Security Association April 2022*
TYPES OF CYBERFRAUD

- **Cash Trapping 57.7%**
  Currency is physically trapped behind the shutter

- **Fraudulent Deposit .6%**
  Deposit of fraudulent notes or checks; Money Laundering

- **Card Theft 24.7%**
  Physical trapping of an ATM card at the location

- **Transaction Reversal .3%**
  Theft of cash from an ATM during a transaction. The account is not debited but subsequently reversed such that the account balance is not depleted.

- **Skimming 16.4%**
  The motorized card accepter has an overlay to capture information

- **Dispenser Jackpotting .3%**
  Cash is forced to be fraudulently dispensed by the ATM without any account being debited
POPULAR METHODS

Cash **Trapping**

Card **Skimming**

Cyber **Jackpotting**
ATM PHYSICAL ATTACKS
What Questions Can We Answer?
The ATM Industry Association (ATMIA) is a global trade association with over 11,000 members in 65 countries, representing ATM and payments professionals from a broad cross-section of the industry. In his current role as Executive Director of ATMIA, USA, David leads ATMIA’s largest region. He works with the membership team to maintain and grow U.S. membership, develops and manages content for the industry’s premier conference, manages regional committee groups, and serves as an ATM industry evangelist. David also leads advocacy efforts for the region at the local, state, and federal regulatory levels, representing the interests of the broader ATM industry, as well as consumers who depend on ATMs for convenient access to cash.

Brad offers 25 years of executive experience in financial services risk management and has collaborative partnerships as a trusted advisor with financial institutions by managing audit and compliance programs. Ingrained in his work is a specialty in cyber security where he leads cyber risk assessments, vulnerability assessments, and penetration testing programs utilizing various methodologies such as ISO, AICPA, and NIST. He has also built security management programs and guarding operation practices integrating various technology solutions for Fortune 500 companies, resulting in uniform operational excellence. Prior to joining Lowers Risk Group, Brad’s experience as executive manager of transaction services for Bank of America. Brad also managed a team that evaluated security controls and surveys for cash vaults, ATMs, and banking centers as well as investigations on suspected vendor robbery and theft.
FBI Supervisory Special Agent Brenda Born entered on duty with the FBI in October 2005 and was assigned to the Washington Field Office where she investigated Cyber Criminal Intrusions, Cyber Threats To Life, and then moved on to investigating Crimes Against Children. In September 2014, SSA Born transferred to Cyber Headquarters where she was the Undercover Coordinator for all Cyber Criminal and National Security Undercover Operations. In September 2017 SSA Born transferred to the Minneapolis Field Office. SSA Born is currently the Supervisor of squad C-4 covering the Violent Crime Task Force and the Child Exploitation and Human Trafficking Task Force.

John has worked in the Cash in Transit industry for several decades. He is currently the VP of Security and provides support and direction regarding CIT losses, investigation, and physical security. He also heads up the claims department in the USA. During investigations John works closely with the US Attorney Offices, District Attorney Offices, Federal, State, Local Law Enforcement investigators, and joint task forces in many of the states across the country. John has been certified as an NRA Law Enforcement Firearms Instructor, State of California Firearms Instructor, and a Simunitions Instructor.

John has been a member ACFE [Association of Certified Fraud Examiners] for the last 12 years and has been on their ACFE Global Alliance committee for the last seven years. He served as the Chairman of the NACA [National Armored Car Association] for the last five years. John has been a member of the California Robbery Investigators Association for the past 40 years and a member of the Robbery Investigators of Texas since its inception.
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