FORENSIC AUDIT SEMINAR
Technology-Enabled Crime
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Uphold public interest

Content

Technology-enabled crime,

- ❑ *detection and investigation*

- ❑ *Data analytics and automation*

Technology as drivers for fraud

Business is being managed and stored by IT systems. Organizations now heavily reliant on IT systems to support business processes in order to improve efficiencies, with reduced levels of human intervention

Exponential growth in the Internet of Things has created a larger cyberattack surface

The digital economy is growing more complex while a lack of highly trained security workers persists worldwide.

Technology as drivers for fraud

Fraudsters are increasingly becoming "tech savvy" and are exploiting control weaknesses in IT systems to perpetuate fraud.

Modern day Fraud is hidden in large data volumes, making it difficult to detect by manual spot checks

Technology as drivers for fraud

However, organizations have not capitalized on these changes and proactively

monitor business data, analyze it for use in early warning, detection and

monitoring of fraud.

Cyber espionage shows no sign of abating

Technology enabled fraud

Major Cyber fraud schemes

- *Criminal Attacks*

- *Identity Theft*

- *Ransomware*

- *Internet of Things Botnets*

- *Phishing and Whaling attacks*

- *Business Process Compromise Attacks*

- *Machine Learning enabled attacks*

Technology enabled fraud

The Big Data

IT tools and Techniques

Examples of data mining and Analysis software.

1. *CCTV*

2. *Disk Imaging software*

   - *Encase*

   - *Forensic Tool Kit*

3. *Spread Sheets*

   - *MS-Excel*

4. *Audit Software*

   - *IDEA*

   - *ARBUTUS*

   - *ACL*

   - *IBM*

IT tools and Techniques

Data analytics;

1. **Trend analysis-** Comparison of same period numbers such as suppliers, customers,

    employee, over time.

2. **Ration Analysis-** unusual transactions represent a deviation from the norm.

3. **Duplicate transactions-** unique identifier values such as invoice numbers,

    sequential,

4. Even Amounts- examine even amounts, rounded-off numbers

5. Outlier amounts- discovering data values that are outside the normal course of business.

6. Benford's Law- nature produces more small things than large things, businesses produce more transactions with small amounts than with large amounts.

IT tools and Techniques

Data analytics;

1. Track and trend reports on fraud and business misconduct.

2. Interpret and benchmark your company's data.

3. Application of data to enhance components and deliverables of the

   anti-fraud program

Using Data Analytics for Fraud Auditing

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Why data analytics? Red-flags-

- *Improved efficiency*

- *Repeatable tests*

- *Wider coverage*

- *Early warning*

Using Data Analytics for Fraud Auditing

Standard Tests

Common fraud indicators translated into knowledge and experience used to develop analytic tests to detect potential instances of fraud.

Customized tests

Customize analytics tests to suit for specific needs of an organization, based on unique/ known issues, key risk areas and data available.

Data analytics in Fraud Audit

- **Fraud test definition** . *Identify and define fraud indicators to test based on business rules, experience and known fraud schemes.*

- **Data identification and extraction** *-Which IT system store data required. Extraction of this data to be done in a controlled environment. Formal request of data prior to audit*

Using Data Analytics for Fraud Auditing

- **Data cleansing-** Clean the data, convert to a format suitable for analysis. Import into analysis software for test execution.

- **Data analysis-** fraud tests interpretation, suitable technical data tests and analysis by use of data interrogation techniques to identify unusual trends, data anomalies and control lapses.

- **Reporting and monitoring-** Generate reports, business focused, easy to understand, summarized results, data insights. Re-perform of these tests on a periodic basis

Using Data Analytics for Fraud Auditing

What could go wrong when using data analytics?

1. *Data quality*

2. *Data volumes*

3. *Data security*

4. *Skillsets*

Interactive Session

Interactive Session

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