DETECTION OF SUSPICIOUS ACCTOUNTS USED IN MONEY LAUNDERING

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ABSTRACT

Money laundering is a criminal activity of converting black money as white money. Money Laundering occurs in three stages: Placement, Layering, and Integration. It leads to various criminal activities like Political corruption, smuggling, financial frauds, terrorism etc. In India, there is no efficient Anti Money Laundering[1] techniques available. The Reserve Bank of India (RBI), has guidelines to identify the suspicious transactions and send it to Financial Intelligence Unit (FIU). The FIU verifies if the transaction is actually suspicious or not.
This process is time consuming, manual and is inefficient method. To overcome this problem we propose an automated[2,] Anti Money Laundering technique which can able to identify the traversal path of the Laundered money using Hash based Association approach[3] and successful in identifying agent[4] and integrator[5] in the layering stage of Money Laundering by Graph Theoretic Approach[6].

Keywords:- *Anti Money Laundering[1], Automated[2], Hash-based association approach[3], Agent[4], Integrator[5], Graph Theoretic approach[6].*

1. INTRODUCTION

Money laundering is a process of converting unaccountable money in to accountable money. Day to day the technology is getting updated and in this fast changing technology many merits as well as demerits are associated. With the advent of E-Commerce the world has been so globalized. Fraud Detection is mandatory since it affects not only to the financial institution but also to the entire nation.

Data Mining is an area in which huge amounts of data are analyzed in different dimensions and angles and further categorized and then eventually summarized into useful information. Data Mining is the process of finding correlation or patterns among dozens of fields in large databases.

All the banks collect the list of transactions which is not in accordance with the Reserve Bank of India (RBI) and then submit it to Financial Investigation Unit (FIU) for further investigation of Money Laundering. This process is very complicated.

The three stages of money laundering include Placement, Layering and Integration.

- The placement stage is the stage where in the actual criminal person disposes all the illegal cash to a broker. This broker or agent is responsible for distributing money.
- In the layering stage the cash is spread into multiple intermediaries that can include banks and other financial institution. The major issue lies in this stage as the difficulty arises in tracing out all the chaining of transactions.
- In the integration stage all the cash is transferred to a beneficiary often called as Integrator. At this stage all the transactions are made legal.

2. EXISTING SYSTEM

-In Current system, The Reserve Bank of India (RBI), has issued guidelines to identify the suspicious transactions and send it to Financial Intelligence Unit (FIU).
-FIU verifies if the transaction is actually suspicious or not.
-This process is becoming more and more complicated since the count of suspicious transactions is increasing substantially.
-This process is time consuming and not suitable to identify the illegal transactions that occurs in the system when illegal cash split into multiple banks or financial institution.

2.1 LIMITATIONS OF THE EXISTING SYSTEM

- Manual Process
- Time Consuming
- Less Reliable
- Less Efficient
- Difficulty in tracking on Chaining of Transactions

3. PROPOSED SYSTEM

- Proposed system is an automation for fraud detection. It is a browser based application.
- Proposed system is a government oriented application which is helpful to prevent frauds.
- Proposed system detects the suspicious accounts used in the money laundering process.
- System is an efficient tool for identifying the illegal accounts, transactions and the amount involved in the layering stage of money laundering.
- “**Hash based Association Approach**” is used to predict the traversal path of laundered money.
- “**Graph Theoretic Approach**” (directed acyclic graph) is used to identify the agent and integrator.

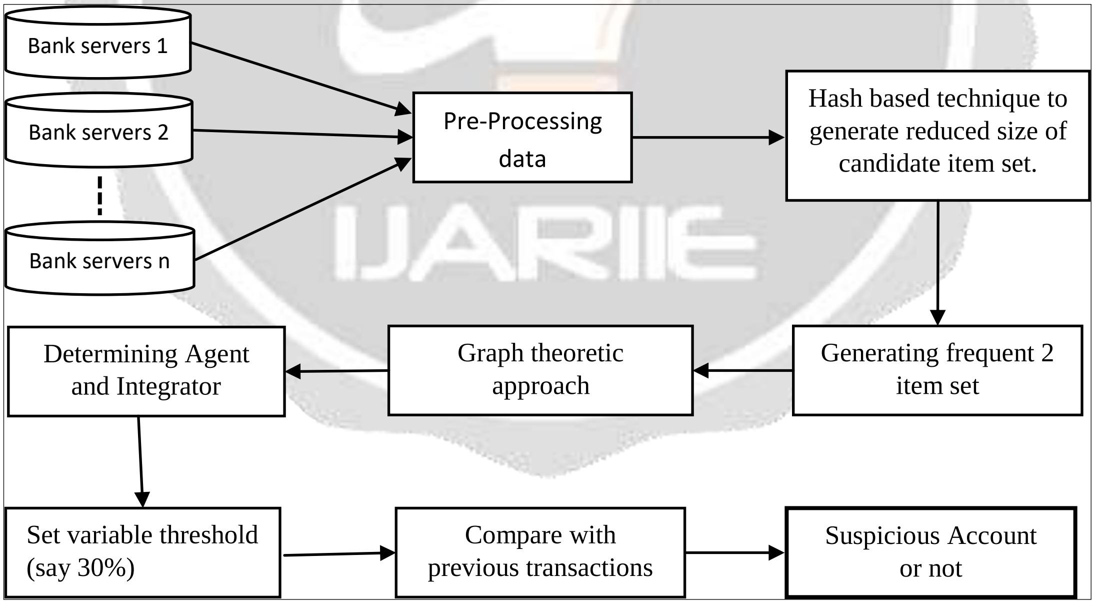
Bank servers 1
Bank servers 2
Bank servers n
Pre-Processing data
Hash based technique to generate reduced size of candidate item set.
Determining Agent and Integrator
Graph theoretic approach
Generating frequent 2 item set
Set variable threshold (say 30%)
Compare with previous transactions
Suspicious Account or not

Fig 1 Proposed system architecture

- The longest path from the root to and end node can be a suspicious transaction path.
- The prediction is further clarified by setting a threshold (say 30% of increment per annum).
- If the money involved in the transactions is above the threshold value compared to tle previous year transactions then the path is confirmed to be suspicious.

3.1 SUSPICIOUS ACCOUNT PREDECTION PROCESS

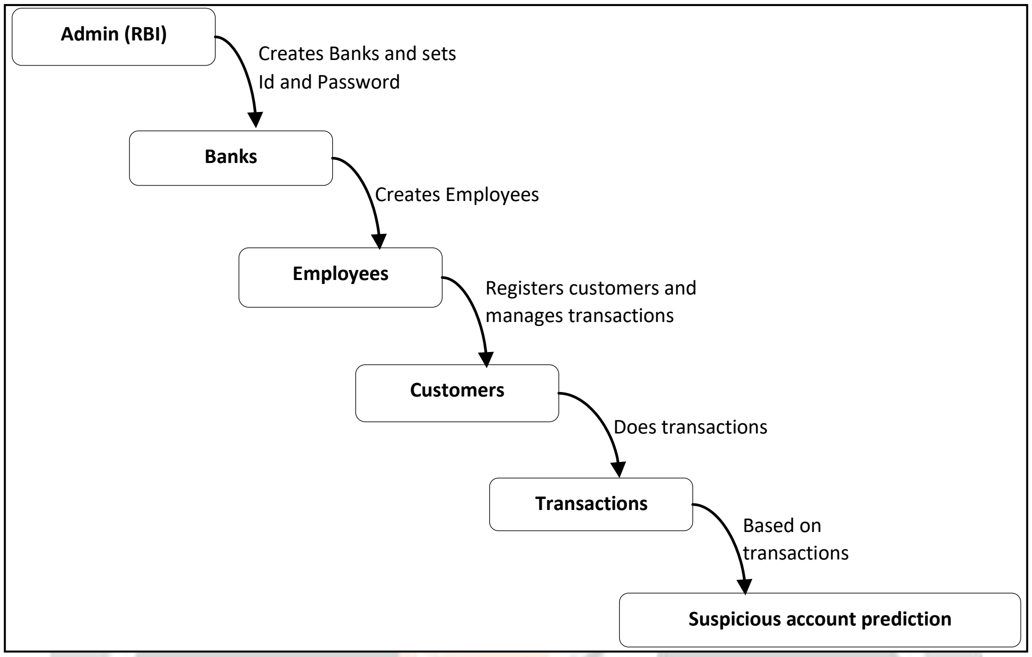
Admin (RBI)
Creates Banks and sets Id and Password
Banks
Creates Employees
Employees
Registers customers and manages transactions
Customers
Does transactions
Transactions
Based on transactions
Suspicious account prediction

Fig 2 Suspicious account prediction process

Admin Module:

- RBI acts as the admin of the whole system.
- Creates Banks and sets ID and Password for each Bank and its servers which is highly confidential.
- Admin can view all the data about the employees, customers and their transactions.
- Finally, suspects whether a transaction the illegal transaction or not.

Bank Module:

- Hires employees for the efficient functioning of the organization.
- Sets a unique ID and password for each employee called Employee ID.
- Manages the employees and the working of the bank.

Employee Module:

- Employee registers customers to their banks.
- Sets unique Customer ID and password foe each registered customers.
- Manages customer transactions and updates it to the bank servers.

Customer Module:

- Using ID and Password does the transactions.

Transaction Module:

- Transactions may be direct deposits, withdrawals, transfer from and to different accounts from any part of the nation.
- Online transactions, mobile banking.

Suspicious Account Prediction Module:

- The admin can view all the data of the bank, their employees and their customers and the customer transactions using the unique IDs.
- Using the algorithms and the automated system the accounts used in illegal transactions are identified.

Fig 2 shows the process involved in the suspicious account prediction.

4. CONCLUSIONS

The concept can be implemented as real time project which is suitable for government sector to detect the suspicious accounts in money laundering. System can be used to identify fake accounts in social networks and in construction works to identify the illegal transactions. The proposed concept can be used to detect various criminal activities like Political corruption, smuggling, financial frauds, etc.. System is an automation to detect the suspicious accounts and illegal transactions which may reduce the corruption.

5. AKNOWLEDGEMENT

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