ATM ROBBERY PREVENTION USING ADVANCE SECURITY

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Abstract - *Our proposed system will provide advanced ATM theft security system. The afflatus for our project is gained from the news and issues which are happening in our daily life. Now a day's larceny or robbery of ATM is superabundantly increased so due to that we trying to disclose remedy for it. Keeping the technique of 'keep it simple' in our mind, we recommended 3-layered advanced ATM theft security system for ATM machine, starting from sensors at the entrance to GPS technology in the ATM machine. Followed by the smart unauthorized access detection and informed to the nearest police station and the Bank Authority.*
Key words: GPS, vibration sensor, motion sensor, ATM theft, ATM Security.

1. INTRODUCTION

We belongs to the edge of digitized and smart world. People are getting smarter day by day with the help of new technology, new innovations. Main reason behind the up-gradation of new technologies are nothing but to overcome the existing problems.

Economic growth of world makes the life smarter and better as compared to previous lifestyle. A smart step towards economy is the introduction of Automated teller machine (ATM), for faster and easier money transfer. But a group of people do malpractices over this ATM system to put people, organization or bank into a millions pounds of loses.

This system proposed in our project, maintain the entry of a single card holder at a time with the help of auto sensor detection. Follows by the vibration detection and GPS technology used in the ATM machine. If any types of unexpected events occurred, nearest police station and the authority will be informed automatically.

2. OBJECTIVES

- To overcome the ATM theft.
- Restrict the entry of any unauthorized person.
- Provide more security.
- Formal step towards smart city.

3. LITERATURE OVERVIEW

In 1975, Korea exchange bank introduced the first ATM, followed by Shinhan Bank in 1982. According to ATM industry Association (ATMIA), there are now close to 3 million ATMs in this world [1]

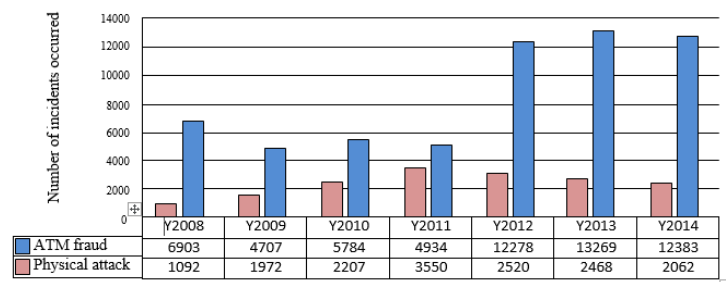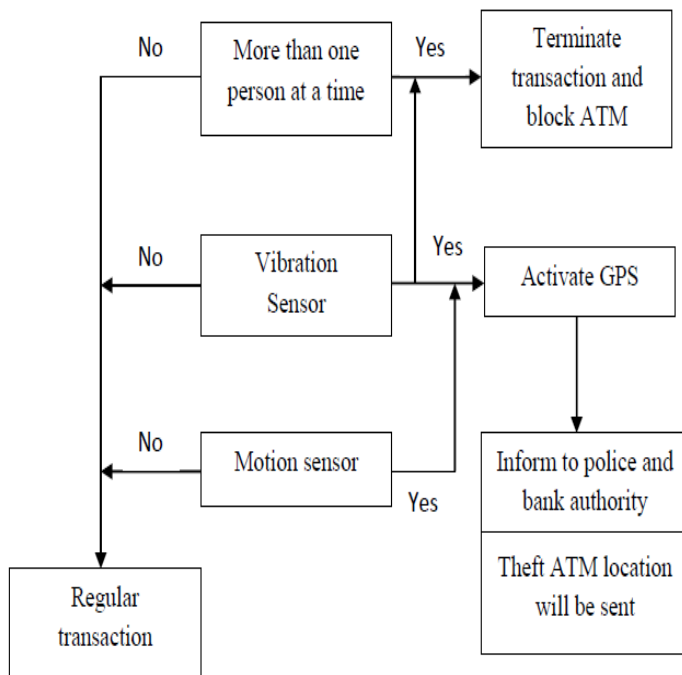|	Y2008	Y2009	Y2010	Y2011	Y2012	Y2013	Y2014
ATM fraud	6903	4707	5784	4934	12278	13269	12383
Physical attack	1092	1972	2207	3550	2520	2468	2062

Figure 1: ATM robbery in per year

Currently, the ATM machines are not secured that much. Those are only have the card swapping facility [2] at the entrance at the door. But this facility doesn't control the number of users entered at a particular instance. Number of ATMs are also covered under this system are also very few. Another proposed secured system is to place vibration sensor [3] into the ATM machine. But if the complete machine is stolen then it has not that much physical use. For that situation we need a tracking device on that machine, which is not in use yet. ATM robbery and fraud occurrence is noticeably increase in last few years (Figure 1). This project will help to fix all this vital issues with the help of some advanced sensors [4] and global positioning system (GPS) [5].

4. WORKING OVERVIEW

Our recommended system will work with 3 different ways as follows:

- **Sensor at the entry:**
  - The sensor at the entry door of the ATM, will restrict the entrance of a single person only.
  - As soon as the card holder enter into the room, no sooner other can enter for that session.
  - More than one entry into the ATM room, will block the transition automatically.

- **Sensor on the machine :**
  - Vibration sensor :
    Vibration sensor will sense any type of unwanted hit or attack on the metallic machine, and alarm will be started.

- Motion sensor :
  Any type of moment by the ATM machine will sense in this sensor, due to unwanted proceedings the alarm will be started.

- **GPS system :**
  - GPS system will work at the most highest security level.
  - If any kind of misplace of ATM machine is occurred, the GPS system will automatically show the present location to the base station of the respective bank.

- ATM machine will block itself and all the transaction will be terminated automatically if any one of the above condition satisfied.
- Conditions which is satisfied, will be informed to the nearest police station and higher authority. They will take the suitable action.

5. ADVANTAGES

- Provides complete ATM theft security.
- Geological location will always be traced of an ATM machine.
- Maintain the entry of only necessary person.
- Our proposal supports smart city concept.

6. LIMITATIONS

- This advanced secured system may be costly as compared to existing.
- Making of ATM machine will be little bit complex in structure.

7. CONCLUSION

Our suggested system will be very much effective to reduce the ATM robbery. This secured system will also help the higher authority to take necessary steps before happening of a theft or unauthorized access by any trespasser. Limitation of this proposed system may be a little bit costly as compared to current ATMs, but when it's all about someone's money, potentiality is more of this system. This advanced ATM theft security system will provide secured, smarter and better tomorrow for the human being.

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BIOGRAPHIES

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