

SECURITY FOR ATM MACHINE USING AADHAR CARD IRIS SCANNER AND IOT

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Abstract-Now days there are many threats to ATM machines. The ATM machine can be theft or smashed by the thieves and money in the ATM machine can be stolen by them. In our paper we concentrate on the Anti-theft of the ATM machine using the Biometric techniques, Aadhar card, Vibration detection sensors and Internet of Things. By using the Iris scanner, Bar code scanner at the front of the ATM Center the Aadhar card is to be verified. If the vibration sensors detect any damage in ATM machine then the door will lock automatically and the information is send to the nearby police station through Internet.

Keywords: Aadhar card, Iris scanner, Face detectors, Internet of Things, Biometric, Vibration detection sensors.

I. INTRODUCTION

In the real world, today people are concerned more about their safety as well as their valuable things safety. Old concepts and devices are modified as per the requirement of people.

An ATM machine is a mechanical system which has the records of a banking institution .It is also known as an Automated banking machine ,Cash Point, Cash Machine or a hole in the wall.

In our day-to-day life we are in the need of new security system. We have to provide the maximum level security to the world. Money transaction plays an important role in almost all the sectors especially trading. Now most of the bank activities are modified through the use of Internet, E-Banking. The E-Transactions became popular in trading systems. But ordinary people use the ATM cards to do their transaction .So that the ATM Machine security plays an important role in money transactions.

II. SYSTEM IMPLEMENTATION

The system is used to provide security to the ATM Machines from the thieves using the Iris Scanner, Aadhar card, Face detection, and the vibration scanner.

A. BIOMETRIC TECHNIQUES

Bio metrics means the measures related to the human characteristics such as finger prints, face detection, etc.

These methods are used with the sensors. These sensors will sense the measures such as finger prints, face detection, Iris scanning. After those data are pre processed and compared with the already stored data of the users. Steps to test data are

- Capture the measures from customers
- Store them in the database
- Collect information from the sensors
- Preprocess the information obtained
- Compare obtained data with the stored data.
- Produce the similarity.

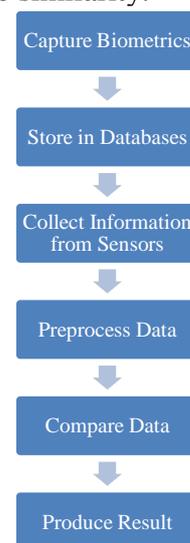


Fig: 2.1 Steps to test data

In our system we are using only Iris Scanning, Face detection only instead of traditional way.

B. AADHAR CARD

India is now moving into a digital world. Everything in our country gets digitalized .One such

digitalization is providing Aadhar card to all the people. This is a small card which is having the details of the person .It provides his/her addresses, name, and fingerprints, iris scan, face detection.

C. VIBRATION DETECTION SENSOR

This is a type of sensor which senses the vibration levels. It will inform the door to lock if any unwanted vibration is caused by the customer. The information will be send through the IoT.



Fig.2.2 Vibration Detection Sensor

D. FACE DETECTION

The face detection technique is used for the blind because the iris scanning cannot be done. It detects the face and checks the face pattern, produce the result.

III. EXISTING SYSTEM

There is an existing system providing the security through the GSM modem, vibration sensors. In this system the information is passed by the GSM modem.

Disadvantages of existing system:

- The thief can easily escape from the place because there is no way to lock them into the ATM center.
- This will take certain time to send data since the sensors sends to micro processor& it sends it to the GSM modem.

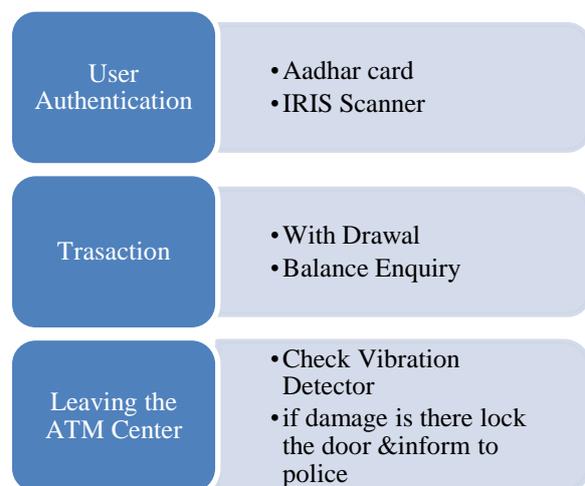
IV. PROPOSED SYSTEM

To overcome the disadvantages of the existing system, we have proposed our system. In the proposed system when the user wants to enter into the ATM center he/she has to show their aadhar in front of barcode scanner and then he/she will be present in front of the iris scanner. This

scanner scans the person iris and compares it with the data stored in the database. It will produce result based on similarity. If it matches only the door will open, if not the door will not get open.

After completing the transaction the user can go out easily. But if any damage is made by the user then vibration sensor will send information to the door and the nearby police station using the Internet of Things (IoT).

Since the door will lock automatically the thief can be easily caught and the security is in high level. The proposed system process are shown in the below figure.



Each stage of transaction has its own steps to be completed. Advantages of proposed system:

- Low false acceptance rate
- The ATM machine can be accessed by authorized persons having Aadhar card.
- Thief can be easily caught by police.
- Provides more security.

V. CONCLUSION

By referring many papers I conclude that the security for the ATM machines using the Iris scanner, face detection, IoT, Aadhar card. In future we can include faster techniques for scanning.

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