



Secure cash dispenser system using gsm module

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ABSTRACT- The increased threat encountered by customers and ATM machines, have drifted the ATM center to a danger zone. The present day monitoring system is much vulnerable which in turn encourages the fraudulent activities and crimes in ATM centers. This is high-time for banking sector and government to join hands to weed out this crisis in security system. So it becomes indispensable to strictly monitor the do's and don'ts inside the ATM centers, very specifically the facial recognition is considered to authenticate the entry of any individual inside the ATM center, it is achieved by employing classifier technique. As an additional feature, a combinational biometry system is used to access the ATM machine. The entire security module is incorporated with an easy access panic button and a sound sensor-cum-alarm, which alerts the cops as well as the bank's security wing, ensuring immediate rescue to the victims including physically challenged people. This overall system proves to be an autonomous, continuous and secured surveillance system.

Keywords-IR sensor; GSM modem; RFID; Camera; Motor.

I.INTRODUCTION

In recent years, the usage of ATM service is increased drastically as it offers more sophistication for the customers to withdraw their amount at 24*7 hours. The

growth in electronics transaction has been adapted by banking sector. Yet ATM service suffers lots of security issues, which threatens the entire banking sector and customer. Due to the prevailing fraudulent act like card skimming, cash trapping etc., the secure financial transaction is not ensured. According to the recent survey, rate of robbery and theft is increasing in every year. The following statistical report shows the crime rate. The ATM crimes are happening at a frequent rate because of lack of security system in center. Mostly robberies are taken place during off-peak hours, such activities leads to 11% of transaction and 60% of crime on day to day routine. A statistics stated that, about 5500 crimes have been recorded in a year. The lack of security encourages these types of crimes which are increasing steadily. ATM centers play a vital role for money withdrawal. Other than the application it has many purposes like money transactions, cash deposits, registrations. Such wide usage of a card demonstrates as how it is indispensable for modern age. Instead of carrying money which is vulnerable for attacks in a society where the unemployment and inflation dominates so it is safer to carry thin flat card which is compactable in wallets. It holds the identity of a person which is unique and subjected to personal usage.

The prime responsibility is to ensure a secured ATM service by providing enhanced security system in center. In this

technically advanced world automation is grabbing attention in every field. So the ATM center can be made fully automated without manual mode of monitoring and intimation as a solution to the troubles faced.

S.NO	YEAR	THEFT	ROBBERIES
1	2007	112,5304	2,384
2	2010	269,4104	4,139
3	2011	270,1094	4,509

TABLE 1.1: ATM Center Misconduct Report

II.RELATED WORK

Implementing biometric as the only authentication to access ATM machine it provide single stage security to operate ATM machine, it is not monitoring number person entering nor their facial identification thus it lack in providing surveillance and protection against man handling of customers. Incorporating ATM theft monitoring system concerned only on alerting banks and cops, if ATM machine is damaged and it never give protection to the customer nor facial identification to trace the intruders. Availing digital lock system suffer from card scammer and card skimming issues it fail in monitoring dos and don'ts of the ATM center thus doesn't ensure the safety to customer against man handling .

III.EXISTING SYSTEM

The main objective of this project is to develop an embedded system, which is used for security applications. In this security system the specific persons can only enter; by using this embedded system we

can give access to the authorized people through the finger print modules and keypads. The system is programmable we can change the data of the authorized people in the data base of the embedded system; we can access the data on the embedded system on to computer. The complete code for the embedded system is going to be developed using C-Language. The embedded system is going to be developed based on microcontroller; whenever the person puts his finger on the reader the system will detect the authorized persons then it asks for pin and gets the message to authorized persons mobile through the GSM technology. Fingerprint reader module will be interfaced to the microcontroller and the pin is entered through the either mobile or keypad.

Problem description

The system relies simply on the finger print reader where even fake ones can be easily used to access. There is no control of the cash delivery motor by the authenticated user. The system merely informs the user about the money transaction and the image of the person who accessed the account is not traced using a camera.

IV.PROPOSED SYSTEM

Our Secure Mobile Wallet and Face recognition is the product belonging to the latest technology trends in mobile communications and IT security. As the client application of the larger system, SAFETM, Secure Mobile Wallet will introduce convenience, functionality and security in financial mobile transaction. The aim of the design is to provide people a more flexible way to use cash and credit cards securely. To implement it, OTA and OTC protocols are used as communication channels and the SIM/UICC SIM card which is actually a smart card in the mobile phone is selected as the container to hold and run the application.

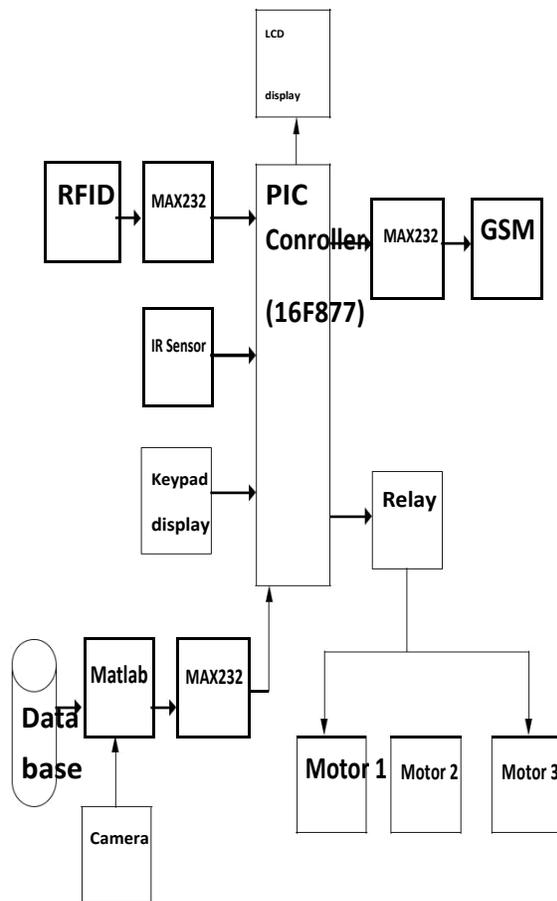


Fig.1. Block diagram

A) PIC MICROCONTROLLER 16F877

PIC16F877 belongs to a class of 8-bit microcontrollers of RISC architecture. It has 8kb flash memory for storing a written program. Since memory made in FLASH technology can be programmed and cleared more than once, it makes this microcontroller suitable for device development. It has data memory that needs to be saved when there is no supply. It is usually used for storing important data that must not be lost if power supply suddenly stops. For instance, one such data is an assigned temperature in temperature

regulators. If during a loss of power supply this data was lost, we would have to make the adjustment once again upon return of supply.

B) DC Motors

For the Closing the ATM door, we are using DC motors. It is operated by 12VDC power supply. In any electric motor, operation is based on simple electromagnetism. A current carrying conductor generates a magnetic field; when and to the strength of the external magnetic field here we are placing DC Motor for closing the ATM door while thieves are trying to broken the ATM machine.

C) JMK AV Receiver with Wireless Camera

It is mini wireless monitoring video camera and wireless receiver set for home and small business surveillance and is used here for demonstration purpose. Simply install the wireless camera in the room where we want to monitor and set the wireless receiver in the next room (up to 15 meters away) and hook it up to a TV or DVR to watch the action or record the footage for the security records.

Here we are placing this wireless camera in the ATM room. Depiction of AV Receiver wireless camera sends the continuous video footages to PC. The card contains a tuner and an analog-to-digital converter along with demodulation and interface logic.

D) RFID

RFID is short for Radio Frequency Identification. Generally a RFID system consists of 2 arts. A Reader and one or more Transponders, also known as Tags. RFID systems evolved from barcode labels as a means to automatically identify and track products and people.

E)GSM MODEM

GSM (Global System for Mobile) / GPRS (General Packet Radio Service) TTL –Modem is SIM900 Quad-band GSM / GPRS device, works on frequencies 850 MHZ, 900 MHZ, 1800MHZ and 1900 MHZ. It is very compact in size and easy to use as plug in GSM Modem.The Modem is designed with 3V3 and 5V DC TTL interfacing circuitry, which allows User to directly interface with 5V Microcontrollers (PIC, AVR, Arduino, 8051, etc.)as well as 3V3Microcontrollers (ARM, ARM Cortex XX, etc.). The baud rate can be configurable from 9600-115200 bps through AT (Attention) commands. This GSM/GPRS TTL Modem has internal TCP/IP stack to enable User to connect with internet through GPRS feature. It is suitable for SMS as well as DATA transfer application in mobile phone to mobile phone interface.The modem can be interfaced with a Microcontroller using USART (Universal Synchronous Asynchronous Receiver and Transmitter) feature (serial communication).Here GSM is used to send the message to user when the person wear the helmet.

SIMCom SIM900A GSM Module

This is actual SIM900 GSM module which is manufactured by SIMCom. Designed for global market, SIM900 is a quad-band GSM/GPRS engine that works on frequencies GSM 850MHz, EGSM 900MHz, DCS 1800MHz and PCS 1900MHz.SIM900 features GPRS multislot class 10/ class 8 (optional) and supports the GPRS coding schemes CS-1, CS-2, CS-3 and CS-4. With a tiny configuration of 24mm x 24mm x 3mm, SIM900 can meet almost all the space.



Fig.2.SIM900A module

F)RELAY

Relays are simple switches which are operated both electrically and mechanically. Relays consist of an electromagnet and also a set of contacts. The switching mechanism is carried out with the help of the electromagnet. It is also used in places where only one signal can be used to control a lot of circuits. The application of relays started during the invention of telephones.They played an important role in switching calls in telephone exchanges. They were also used in long distance telegraphy.They were used to switch the signal coming from one source to another destination. After the invention of computers they were also used to perform Boolean and other logical operations.Here relay is used to ON/OFF the motor in the ATM machine.

V.CONCLUSION

Rapid increase in ATM crimes has made the security system the need of the hour. The conventional security system, which is very much concern over electronic transaction and not concentrating on ATM centers safety which in turn triggered the ATM center to host many fraudulent activities. This system shortens the problems faced in the conventional security system as it emphasize the need of strictly enforcing the dos and don'ts of ATM centers and it priorities physical safety of the costumer and

ATM machine, by providing 24*7 surveillance and immediate rescue alter. As it is very particular about facial identification to authenticate the entry it provide sufficient data in the event of any discrepancies there by illegal activities can be avoided Department in VNR College of Engineering, Ponnur, AP, inside the ATM. It ensures more authenticated usage of a India account as per the RBI rules. The mind set of people to do mischievous activities inside the ATM centre is flatten. This system provides complete information regarding an unethical event and helps to track the intruder. This also provides necessary evidence for the legal prosecution.

VI. REFERENCES

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