

Implementation of Smart Bag

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Abstract— The security of ATM machine has become more vital day by day. The vehicle which carry the money to be feed into ATM machine needs to be more secure. In general, all the vehicle is having GPS tracker device fitted inside the vehicle, and which is inspect by the high authority. But the authority could check only the location of the vehicle and not to the money case inside the vehicle. Nowadays field of electronic has designed with advanced electronic technology that can provide facilities like surveillance. All the electronic inventions are to reduce manual effort upon mechanical work and to create an interaction between human and machine. Human following bags are one of the finest technologies in electronics and by utilizing its advantages and applications in day to day life in this paper we are providing authority to the person inside the vehicle. The only person will be responsible for the money loss or theft. The person will have some authority to open the suitcase and transfer the money to the ATM machine. In terms of privacy the bag can be activated by owner's identity and also location can be tracked using GPS and GSM. In this bag within a small platform all the facilities are implemented together efficiently.

Key words: GPS - Global Positioning System, GSM - Global System for Mobile

I. INTRODUCTION

Various technologies have been introduced in recent years to deter car thefts, for example, Immobilizers to remotely disable the lost vehicles, Microdot Identification to identify auto parts using unique microdots, Electronic Vehicle Identification (EVI) to identify the vehicle against a registration database, lojack System to use in-built transponders for tracking down vehicle, GPS to locate the position of the lost vehicles using global positioning system, and so on. There are still some security gaps which these technologies do not address. For example, while the immobilizer can prevent a thief from starting a car engine and driving away, it is unable to stop professional thieves from towing the car away. The professional thieves can then dismantle the stolen vehicle and re-sell the components. The thieves will also have the luxury of time to remove the immobilizer and re-sell the car using another identity. The EVI approach is efficient when it comes to identification and verification of vehicles since this is done electronically.

The project proposed here aims to design a next generation auto theft prevention system by adding significant enhancements and modernizing the existing system and thus try to overcome the above drawbacks. By implementing this techniques, the possibility of a Theft is very less or no theft. The following modules are implemented in this project. Smart bag is designed in such a way that it is light weight luggage bag which is modified with advanced electronic technology for the purpose of advanced security system and also made the human travelling facilities more efficient with less effort. Auto trailing technology which reduces human efforts. Wherever the people travel they used to carry luggage especially to airport all of them dragging out their heavy

luggage perhaps trailing of the bag is very difficult task for old peoples. If bag that follows passengers by utilizing human following concept then entire problem get vanished. Following technique is implemented using data taken from ultrasonic and IR sensor. Ultrasonic sensor always measure distance between bag and human by sending sound waves and collects the reflected waves when it tracks an obstacle. Misplace or loosing of bag is also avoidable using proximity detection method. Beyond this it has feature of tracing and tracking the bag using GPS and GSM and locate the accurate position of the bags. Fingerprint locking system is used in this project Recharging port is also provided in this project. For recharging port an in built power bank is used. Recharging port mainly used for charging of mobiles phones and laptops.

II. LITERATURE REVIEW

A. Design and Implementation of Smart Bag

This paper suggests us about design and construction of smart bag. Human following activity can be done by using two methods first by using UV and IR sensors and second by using web camera. We are going to use UV and IR sensors to perform this task. Security is most important factor in daily life so providing protection to bag is necessary. Ensuring safety of peoples and their valuable things is very important for the prevention of illegal handling. The ability to track and trace from anywhere on the earth has been mankind's unfulfilled desire. GPS and GSM are used to get the exact location of the bag. Fingerprint locking system provides advanced security to the bag. This project is actually an interfacing of small mini projects in order to implement the whole project.

B. GSM and GPS used for Tracking and Tracing of Smart Bag

Tracking systems were first developed for the shipping industry to track cargo. First devices developed were passive. To obtain automatic and real time tracking active devices are to be used. Muruganandham and P. R. Mukesh proposed a system that uses GSM/GPRS modem and GPS system to provide real time tracking over the internet by TCP/IP connection through Java applications developed specifically for it. External databases are used to maintain the tracking details. The tracking device consists of the GPS, GSM modem and the Arduino. Location name and GPS coordinate values are stored as a LUT (Look up Table) in the Arduino. As soon as the GSM modem receives SMS request for location, the microcontroller checks for a closest location match inside the LUT with the received GPS coordinate data. The matched location detail is sent to the user as an SMS using GSM modem thus completing the request. Further service enhancements like breakdown alert can be made into the proposed system in a cost effective manner.

C. Fingerprint locking system

Fingerprint recognition technology allows access to only those whose fingerprints that are pre stored in the memory.

Stored fingerprints are retained even in the event of complete power failure or battery drain. These eliminates the need for keeping track of keys or remembering a combination password, or PIN. It can only be opened when an authorized user is present, since there are no keys or combinations to be copied or stolen, or locks that can be picked. The fingerprint based lock therefore provides a wonderful solution to conventionally encountered inconveniences. This report focuses on the use of fingerprints to unlock locks, as opposed to the established method of using keys. Fingerprints are patterns of ridges and valleys on the surface of the finger. Like everything in the human body, these ridges form through a combination of genetic and environmental factors. The genetic code in DNA gives general orders on the way skin should form in a developing fetus, but the specific way it forms is a result of random events.

D. Proximity detection using Bluetooth module

Proximity detection is used to keep your luggage close. If someone unknowingly took your bag and is strayed outside the range of your Bluetooth signal then alert message will display on your mobile app. Then using real time GPS we can track the bag. The connecting distance is fixed between the bag and mobile say 10 meters.

III. WORK CARRIED OUT

The main purpose of location-based services is to provide services to customers based on the knowledge of their locations. Examples of these services include real-time traffic information, digital map services which are delivered to mobile terminals according to user's location to minimize data transmission, providing dynamic guidance services according to the users' location and current traffic condition; requesting the nearest business or service (e.g., the nearest restaurant or cinema) and location based advertising

IV. IMPLEMENTATION DETAILS

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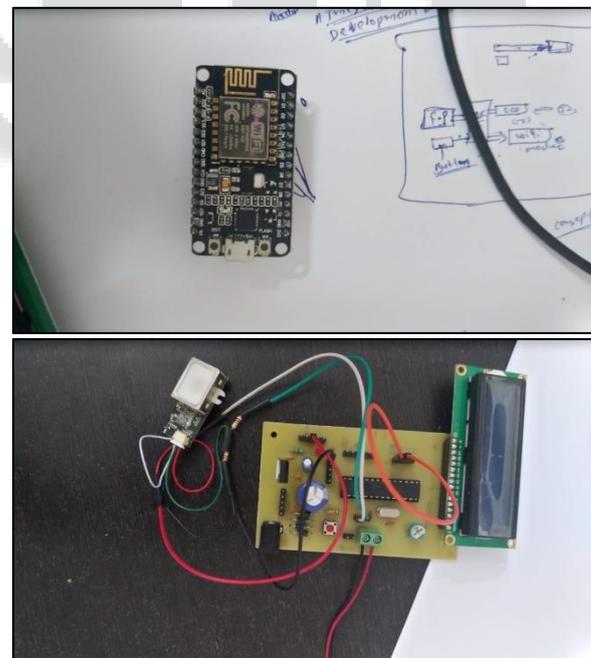
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V. RESULTS



VI. CONCLUSIONS

In this paper we have discuss the risk and issues during depositing the money in any ATM machine. Thus we have proposed the system in which the theft chances of the money bag can be reduced. The money bag in the vehicle will also have the GSP system fixed in it. thus the admin will get to know in case of money bag get stolen. Also the money bag can be open with the authorized person only with his

fingerprints. At last the admin will get the notification of how much money got deposited in the ATM machine.

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