

VEHICLE THEFT DETECTION USING GSM&AUTHENTICATION

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Abstract— An automobile remote alarm system based on GSM communication network is introduced. The GSM module and Microcontroller is combined with the system, GSM are used to achieve short message service (SMS) alarm and dual theft-proof of automobile. The shortcoming of traditional systems including low security and small alarming range is overcome, and the cost of this system is cut down, so it should have good application prospects and the authentication of one's license and RC book of a vehicle bearer can be identified with an android mobile by storing the required information that is withheld to a server. This app could be used by both the users.

Keywords—GSM; ARDUINO; Theft Control; Server-Registered License & RC Book

1. INTRODUCTION

Due to the simple and poor nature of these security systems, auto theft incidents worldwide are on the rise. Here are some of the major problems with the existing auto theft prevention system.

At the present time, the rate of crime is increasing rapidly because it is a kind of evident from the actual fact that thefts became a matter of routine. Particularly these vehicles may incur huge losses on the part of the amount invested on these vehicles. To overcome this problem, there are numerous technologies are available in the market such as GPS, GSM and GPRS systems. In the present days, most of the vehicles are designed with GSM based vehicle theft control systems, which provides the protection from thefts even if they are parked in the parking area.

one can look for several products pertaining to security systems India. Big corporate giants and many renowned companies have launched quality security products to safeguard homes and precious belongings. One can find burglar alarm, fire alarm, home security kits, new age door sand windows, security cameras, motion detectors, persona safety products, wire and wireless security products and other such products. These products are available in low end as well as high end range. Depending upon one's budget, he or she can go for the required security system suitable to the place to be secured. One can also find numerous security experts who provide customized suggestions for home security. A car alarm is an electronic device installed in a vehicle in an attempt to discourage theft of the vehicle itself, its contents, or both. Car alarms work by emitting a High-volume sound. A code name or cryptonym is a word or name used, sometimes clandestinely, to refer to another name, word, project or person. They may also be used in industrial counter-industrial espionage to protect secret projects and the like from business rivals, or to give names to projects whose marketing name has not yet been

determined.so in our project we use this code name as an access to license and RC book of a man/woman and vehicle respectively.

2. EXISTING SYSTEM

2.1 Overall view:

The existing system had dealing with only the ignition systems and some other low secure locking systems and a thief may know to join the opposite pole wire of ignition to start an engine. Then the authentication includes some of the unlocking and the trace out option for an account that may be a banking sector and other organizational sectors, this existing does not including the identifying purposes.

2.2 Disadvantage:

Due to the simple and poor nature of these security systems, auto theft incidents worldwide are on the rise. Here are some of the major problems with the existing auto theft prevention system.

Only the RC book can be viewed in a server of government.

3. PROPOSED SYSTEM

3.1 Vehicle Theft Detection Using GSM and Authentication

- Less signal deterioration inside buildings.
- Ability to use repeaters.
- Talk time is generally higher in GSM phones due to the pulse nature of transmission.
- The availability of Subscriber Identity Modules allows users to switch networks and handsets at will, aside from a subsidy lock

In this system we demonstrate a closing of a valve in the Fuel injection sprayer of the engine which a stranger can't able to find this trick and the stranger can't break any valve in such a case to Engine part.

Authentication of license and RC book in a unique code could be an advantage of withholding the information in the server through android mobile.

3.2 ADVANTAGES

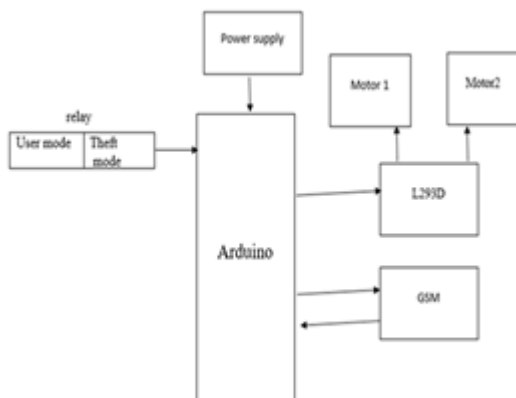
- Can be able to control the fuel injection valve pump and Ignition.
- Message command can be sent from anywhere at any distance.
- Permanent storage of identity and there is no failure.
- Uploading and retrieving of data at any time.

4. HARDWARE REQUIREMENTS

- Arduino
- Relay
- Power supply
- L293D
- Motor
- GSM
- Android Mobile

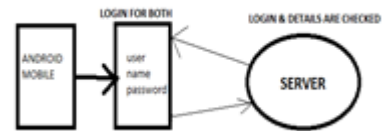
5. SOFTWARE REQUIREMENTS

- Embedded c
- Arduino ide
- Android software
- End to end coding.



6. WORKING

There will be a relay used to shift its position to user mode and theft mode. Normally when a vehicle is in static position it can be switched at theft mode, so when a stranger tries to start the vehicle immediately the GSM could message to the owner and the engine shuts down by cutting off the Ignition system and the fuel Ignition valve. So that a delay can be given to notify this as a theft. When stranger find the trick of relay and shifts to the user mode a message will be sent to the owner's mobile phone and the reply of message from owner



The android mobile app is also introduced with this system, which has the ability to store and retrieve data of license and rc book of a vehicle to an android mobile phone. So there will be three login here. One is the police login, The other two are user and RTO.

When a police login to his/her account he could retrieve data of a driver/owner to check such a vehicle is theft one or not and he may also refer to friend's lists and can generate OTP and the details of last recognized license details to the owner's mobile so that he can also receive the same OTP to compare with it. When the user logged in he/she may be allowed to edit the details of the friend's lists and the lasts update of the vehicle. And when the RTO logged in he /she may edit the image of the license and the RC book .

7. CONCLUSION

Thus the car theft detection and control can be easily controlled with this project as they withhold the necessary implications that have to be replied according to the position of the bearer of the vehicle and that particular bearer can be able to access their identity which can lead to a new smart access of their own identity in future and if a group of people needed to get an identity they can be allowed by the government to access their biometrics as well.

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