



GPS VEHICLE TRACKING AND THEFT DETECTION

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ABSTRACT

Currently most of the public having their own vehicle, theft is happening on parking and sometimes driving insecurity places. The safe of vehicle is extremely essential for public vehicles. Vehicle tracking and locking system is installed in the vehicle, to track the place and locking engine motor. The place of the vehicle is identified using Global Positioning System(GPS) and Global system Mobile Communication(GSM). These systems constantly watch a moving vehicle and report the status on demand. When the theft is identified, the responsible person sends SMS to the microcontroller, then microcontroller issue the control signals to stop the engine motor. Authorized person needs to send the password to controller to restart the vehicle and open the door. This is more secured, reliable and low cost.

KEYWORDS: Vehicle Tracking, Locking, Microcontroller, GPS, GSM.

1. INTRODUCTION

The project proposes a GPS based vehicle tracking system that tracks the vehicle and sends the tracking data over through a sms. The microcontroller acts as the controlling head of the system. When the system goes in Theft mode the authorized user gets the alert message and user will Able to stop the vehicle engine immediately via sending sms to system With 'S' Keyword. The system includes a GPS modem that tracks the vehicle location in the form of latitude and longitude. This location can be accessed via sms that is being sent to the user. With the help latitude and longitude information SMS user will able to locate vehicle with Google map. This system proves very beneficial for transport and travel companies as they can now keep track of their vehicles.

Existing system

In [1], the hardware and software of the GPS and GSM network were developed. The

proposed GPS/GSM based System has the two parts, first is a mobile unit and another is controlling station. The system processes, interfaces, connections, data transmission and reception of data among the mobile unit and control stations are working successfully. These results are compatible with GPS technologies. In [2], a vehicle tracking system is an electronic device, installed in a vehicle to enable the owner or a third party to track the vehicle's place. This paper proposed to design a vehicle tracking system that works using GPS and GSM technology. This system built based on embedded system, used for tracking and positioning of any vehicle by using Global Positioning System (GPS) and Global system for mobile communication (GSM). This design will continuously watch a moving Vehicle and report the status of the Vehicle on demand. In [3], Face Detection System used to detect the face of the driver,

and compare with the predefined face. The car owner is sleeping during the night time and someone theft the car. Then Face Detection System obtains images by one tiny web camera, which is hidden easily in somewhere in the car. Face Detection System compared the obtained images with the stored images. If the images don't match, then the information sends to the owner through MMS. The owners get the images of the thief in mobile phone and trace the place through GPS. The place of the car and its speed displayed to the owner through SMS. The owner can recognize the thief images as well as the place of the car and can easily find out the hijackers image. This system applied in our day-to-day life. In [4], this system provided vehicle cabin safety, security based on embedded system by modifying the existing modules. This method monitors the level of the toxic gases such as CO, LPG and alcohol within the vehicle provided alert information as alarm during the dangerous situations. The SMS sends to the authorized person through the GSM. In this method, the IR Sensor used to detect the static obstacle in front of the vehicle and the vehicle stopped if any obstacle detected. This is avoiding accidents due to collision of vehicles with any static obstacles

2. PROBLEM STATEMENT:

The safe of vehicle is extremely essential for public vehicles. Vehicle tracking and locking system is installed in the vehicle, to track the place and locking engine motor. And this will be helped in the prevention of vehicles thieving.

- Improve safety.
- Minimize fuel cost.
- Theft recovery.
- Lower operational costs.

PROPOSED SYSTEM:

In this proposed work, a novel method of vehicle tracking and locking system used to track the theft vehicle by using GPS and GSM technology. This system puts into sleeping mode while the vehicle handled by the owner or authorized person otherwise goes to active mode, the mode of operation changed by in person or remotely. If any interruption occurred in any side of the door, microcontroller is interrupted and SMS is sent to the microcontroller. The controller issues the message about the place of the vehicle to the car owner or authorized person. When send SMS to the controller, issues the control signals to the engine motor. Engine motor speeds are gradually decreases and come to the off place . After that all the doors locked. To open the door or restart the engine, authorized person needs to enter the passwords. In this method, tracking of vehicle place easy and doors locked automatically, thereby thief cannot get away from the car.

Block Diagram:

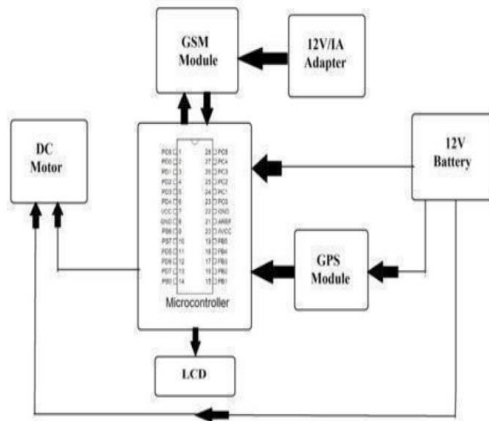


FIG 2.2 GPS VEHICAL TRACKING AND THIEF DETECTION CIRCUIT

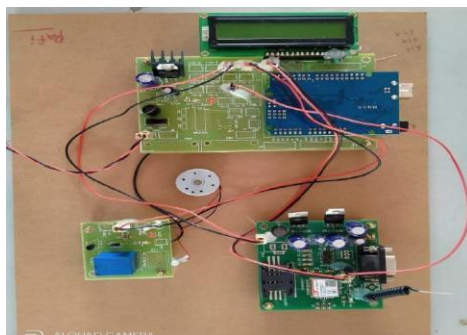
Advantages:

- Improve safety.
- Minimize fuel cost.
- Theft recovery.
- Lower operational costs.
- Increase productivity.

Disadvantages:

- Inaccuracy.
- Driving distraction.
- Lack of local knowledge.
- Battery failure.
- Privacy issues and crime.

Results:



WORKING:

The project proposes a GPS based vehicle tracking system that tracks the vehicle and sends tracking data over through a sms .The microcontroller acts as the controlling head of the system. When the system goes in theft mode the authorized user gets the alert Message and user gets the alert message and user will Able to stop the vehicle engine immediately via sending sms to system With ‘S’ Keyword . The system includes a GPS modem that tracks the vehicle location in the form of latitude and longitude. This location can be accessed via sms that is being sent to the user. With in the help latitude and longitude in formation SMS user will able to locate vehicle with Google map . This system proves very beneficial for transport and travel companies as they can now keep track of their vehicles.

CONCLUSION :

This proposed work a novel method of vehicle tracking and locking systems used to track the theft vehicle by using GPS and GSM Technology. When the theft identified, the responsible people send SMS to the micro controller, then issue the control signals to stop the ignition. After that all the doors locked. To open the doors or to restart the engine authorized person needs to send other control messages. This system is cost-effective, reliable and has the function of preventing theft and providing accurate tracking system. A smart anti-theft system is one of the essential systems that homogenize both GPS and GSM systems. It is fundamental because of the huge numbers of uses of both GSM and GPS frameworks and



the wide use of them by a great many individuals all through the world. This complete system is designed to provide better security for vehicle considering the low range vehicles.

FUTURE SCOPE:

In future we can include vibration sensor in the system, which can detect the intensity of vehicle hitting an object. If the intensity exceeds certain level, it detects accident and can send SMS to relatives and also the system can include USB connected webcam.

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