

# Vehicle Theft Control & Locking System

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## ABSTRACT

Currently almost of the public having an own vehicle, theft is happening on parking and sometimes driving insecurity places. The safe of vehicles is extremely essential for public vehicles. Vehicle tracking and locking system installed in the vehicle, to track the place and locking engine motor. The place of the vehicle identified using Global Positioning system (GPS) and Global system mobile communication (GSM).A vehicle tracking system combines the installation of an electronic device in a vehicle, or fleet of vehicles, with purpose-designed computer software to enable the owner or a third party to track the vehicle's location, collecting data in the process.GPS is used to find the position of the vehicle and GSM used to send the message to the specified person whose number is stored in the micro controlled. At once if the vehicle seems to be theft, the owner has to just send SMS to that vehicle means vehicle will be stop all the door will be locked then theft will be locked in the car. This is more secured, reliable and low cost.

**Keywords**— GPS, GSM, SMS, LBS

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## I. INTRODUCTION

Currently almost of the public having an own vehicle, theft is happening on parking and sometimes driving insecurity places. The safe of vehicles is extremely essential for public vehicles. The place of the vehicle 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 identified, the responsible person send SMS to the microcontroller, then microcontroller issue the control signals to stop the engine motor. Authorized person need to send the password to controller to restart the vehicle and open the door.Currently GPS vehicle tracking ensures their safety as travelling.

This vehicle tracking system found in clients vehicles as a theft prevention and rescue device. Vehicle owner or Police follow the signal emitted by the tracking system to locate a robbed vehicle in parallel the stolen vehicle engine speed going to decreased and pushed to off. After switch of the engine, motor cannot restart without permission of password.GSM and GPS based tracking system will provide effective, real time vehicle location, and reporting. A GPS-GSM based tracking system will inform where your vehicle

is and where it has been, how long it has been. The system uses geographic position and time information from the Global Positioning Satellites. The use of GSM and GPS technologies allows the system to track vehicle and provides the most up- to-date information about ongoing trips.

Vehicle tracking systems are also popular in consumer vehicles as a theft prevention and retrieval device. Police can simply follow the signal emitted by the tracking system and locate the stolen vehicle. When used as a security system, a Vehicle Tracking System may serve as either an addition to or replacement for a traditional Car alarm. Some vehicle tracking systems make it possible to control vehicle remotely, including block doors or engine in case of emergency.

## BRIEF DESCRIPTION

### A. Abbreviations and Acronyms :

- GPS - Global Positioning system
- GSM - Global system mobile communication
- LBS - Location Based Services

- mOPE - mutable order-preserving encryption.
- kNN - k Nearest Neighbors

### B. GSM Overview –

GSM ( Global system for mobile communication ) is a digital mobile telephony system that is widely used in Europe and other parts of the world. GSM uses a variation of time division multiple access (TDMA) and is the most widely used of the three digital wireless telephony technologies ( TDMA, GSM and CDMA ). GSM digitizes and compresses data then sends it down a channel with two other streams of user data each in its own time slot it operates at either the 900MHZ frequency band.

### C. GPS Overview –

The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather, anywhere on or near the Earth, Trying to figure out where you are is probably mans oldest pastime. You may think that you only need a GPS tracking device to get you from point A to point B if you are unsure of where you are driving, but did you know that there are many other tracking systems that you may have a use for tracking. GPS receiver help us to navigate back to a starting point or other predetermined location without the use of maps or any other equipment

Some top-selling applications based on GPS -

- Navigator :  
Navigation applications are the most famous GPS applications. The latest releases of those applications allow users to have much advanced features and facilities.
- Tracking :  
A tracking applications are not that much popular as the navigation applications. But, so many people take uses of them. It enables users to and a location of any object that is tagged with a system.
- Locimobile app on tracking people :  
This enables iPhone users to track people in a particular place at a particular time.
- GPS Tracking Lite v 2.0 is taking the nation by storm:  
GPS Tracking v2.0 by Locimobile is their biggest update to date application and it includes much advanced features than the others.

## II. PROPOSED METHOD

In this proposed work, a 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, then the IR sensor senses the signals and SMS sends 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.

### A. Block Diagram of Tracking System

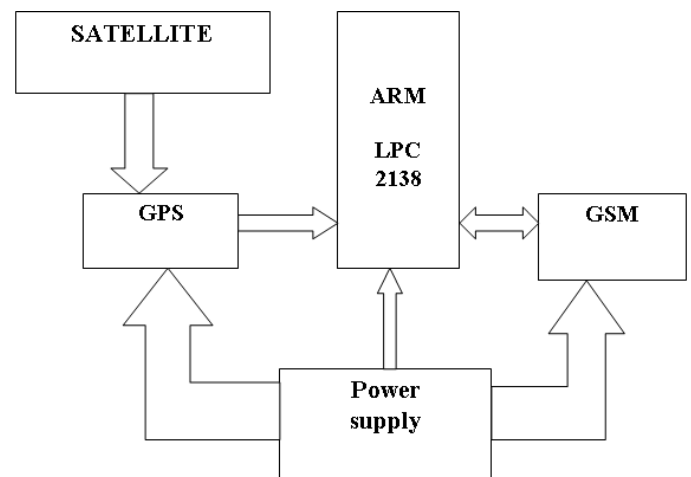


Figure 1 Block Diagram of Tracking System

## III. CONCLUSIONS

In case of any theft, the owner can track the location of the vehicle. In public transport system, the implementation of this equipment will ease the people. When public transport systems like bus, trains these are installed with this equipment, People can know the location of the vehicle and arrive in the stop in time. Modifying the code, we can make it to send the position of the vehicle periodically to a subscribed mobile number so that companies can keep an eye on their vehicles. Thus we can make use of the available technology to the benefit of the people by helping the owners of the vehicle to keep track of their vehicles.

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