**A Review on GSM and GPS based vehicle Tracking System**

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**Abstract**- It conducts a survey of various GSM and GPS-based tracking methods. among the most important components in the context of travel, which is primarily used by many motorists, is vehicle mapping. A car tracking system mixes the setting up of a gadget that fits in or inside of cars with customised software for computers that allows the person who owns it of a user to monitor the location of the car while collecting data. Yet, different types of automatic vehicle location technology can be used. Today, auto tracking systems frequently employ GPS satellites to find the vehicle. via the Internet or specialised software, a single can view or locate vehicle data via electronic google map.

**Keywords**- GSM (Global Services for Mobile Communication),GPS.(Global positioning system) Vehicle Tracking, Navigation.

I.INTRODUCTION

Of the most important uses of travel, mostly used by drivers, is car mapping. The maps that the computer gives the driver with have the greatest significance in this region. The owner companies frequently found it challenging to monitor whatever was happening if massive objects like cars spread across the ground. We needed a kind of mechanism for recording the object's position and the distance it travelled at all times. In addition, consumers ought to monitor their cars to prevent theft for any kind as police can use tracking information to find vehicles stolen. A tracking device based on GSM & GPS will provide accurate, actual time vehicle tracking and data system for tracking based on GSM as well as GPS will show users where the vehicle is, wherever it was previously, as well as how long it was there. It uses the Global Position Satellites to obtain time as well as geographic data. Real-time vehicle variables, like setting, are reported via text messages while it's in motion [9]. Wireless communication is utilised by the network to offer an effective leadership and transport motor

 II.LITERATURE SURVEY

**1.Advanced vehicle tracking system on google earth using GPS & GSM** It implements a GPS-based vehicle monitoring and navigation solution. It's accomplished via retrieving car data via GPS and GSM, like setting, distance, etc. These characteristics allow for the alteration of that information: after each user-defined moments interval, the consumer obtains details about the car, such as its location as well as additional details. subsequently an alert or tracking server get this periodic map data. Google Earth serves to show the location of the car on an electronic Google Maps, while reflecting the provided data to the display device.

**2.Vehicle tracking and accident warning system using GPS & its implementation in FPGA**

The GPS system is used in this piece as well to determine the vehicle's position. GSM is used to send users the information from the GPS device as an SMS text. Following the user's getting of this SMS, the cellphone modem sends the car's owner a reply message. Recognition of any errors or incidents involving the vehicle follows with the use of an inertial sensor, which also sends out an alert in the event of such catastrophes. It also uses a Field Programming Graphics Spartan the processor, that governs every part, compared to the arduino found in a lot of other systems.

**3.GSM & GPS based tracking system** It offers a Tele tracking and oversight method for the transit of buses and taxis inside the town, which is helpful for commuter vehicles such buses & taxis. The method mentioned in this article comprises of a "On-Board Unit" that is mounted in the intended vehicle. This in module includes the ARM the processor, a GSM modem, or GPS. The GPS receiver on the vehicle terminals receives and solves the navigation message as is transmitted from the location of the GPS satellite. The satellite in question calculates the latitude and longitude of the vehicle's supervises, converts them to a short text using a GSM communication the controller, and sends the data to the monitor office through GSM

**4.Design and development of GPS-GSM based Tracking system with Google map- based Monitoring**

It makes use of Global Positioning gadgets (GPS), which is used to obtain a satellite's longitude and latitude coordinates during the essential information. We are all aware of the value of tracking structures in today's society. This device may be utilised to monitor troops, detect car theft, and many other things. Microcontroller, GPS, and GSM are every part of this network. One GPS gadget is all that is required for this network, plus Sms lets in simultaneous communication. A sim card is included with the GSM modem, which uses the same everyday communication protocol of an ordinary phone

**5.GSM and GPS based vehicle location and tracking System** It uses an RF emitter that is attached to a car that has its own distinct ID. the information that will be continually transmitted through the micro - controller's associated RF sensor. The GPS will collect the vehicle's location data and send it to the microprocessor. If an RF receiver fails to receive the signal coming from the RF sender, the receiver unit will send a signal to the a microcontroller so we can identify the loss from that signal.

If it turns out that the car is stolen, it is going to notify the individual a map of the car because the proprietor of the car receives the data by SMS via the GSM

**III.COMPARATIVE STUDY**

Given previous car monitoring methods, it's clear that each one is suited to its purpose, but in certain cases, we need constant access to the internet, and these devices may shut down if the internet fails. The initial method utilises a GPS to track the precise position of the car and send the data to the controller, and then uses Google Maps to present where the car is onto the screen of the unit. Yet, this system is useless without internet access since only Google Map

can show the car's location. In the other system, FPGA is employed to programmatically identify each component. By take account of all of these factors, the forthcoming roll out ought to remove all of the disadvantages while offering a lot more functionality that will render the system intuitive. and efficient

 **III.CONCLUSION** Auto tracking systems are becoming increasingly common every day, not only in big cities but also in tiny villages, as they have become a vital solution for everyone who wants to guarantee the safety of their car. Due to its total integration, the user can simply track his car at any moment from anywhere. People have found a successful way to keep tabs on their vehicle with being highly near them despite knowing that car theft is on an increase and people have no way to avoid buying vehicles as result. Such systems may successfully avoid theft and maintain adequate oversight on them.. In basic terms, all of these devices track the car utilising GPS and GSM. The user may use this method to figure out what the car is, the distance it has travelled, and how much kilometres it has travelled. The user is privy to his car's location at any time. This method is dependable and extremely safe. The setup can be readily upgraded according to future demands without the need to begin from scratch, which additionally improves its efficiency.

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