

IOT based Vehicle Navigation System using GPS and GSM

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Abstract : *A vehicle pursuit system is An device put in during a vehicle to modify the owner or a 3rd party to trace the vehicle's location. This project is projected to style a vehicle pursuit system that works victimization GPS and GSM technology, which might be the most cost effective supply of car pursuit system. this technique provides minute by minute update concerning vehicle location by causation SMS through GSM electronic equipment. Arduino UNO gets the coordinates from GPS electronic equipment and so it sends this info to user in text SMS. GSM electronic equipment is employed to send this info that's the position of the vehicle in terms of latitude and meridian in real time via SMS sent to the owner of the vehicle. the newest like GPS are extremely helpful currently days, this technique permits the owner to look at and track his vehicle and establish vehicle movement and its past activities of car.*

Keywords: *GPS, GSM, Navigation, IoT, Micro program Design Aids, Microcode Applications*

I. INTRODUCTION

The vehicle following system could be a total security and fleet management answer. it's the technology accustomed confirm the placement of a vehicle mistreatment totally different strategies like GPS and alternative navigation system operative via satellite and ground primarily based stations. fashionable vehicle following system use GPS technology to watch and find our vehicle anyplace on earth, however generally differing types of automatic vehicle location technology also are used. The vehicle following system is fitted within the automotive that has effective real time location and also the knowledge will even be keep and downloaded to a laptop which may be used for analysis in future. this technique is a necessary device for following automotive any time the owner needs to watch it and nowadays it's extraordinarily fashionable among individuals having dearly-won cars, used as thievery interference and recovery of the taken automotive. the information collected is viewed on electronic maps via web and computer code.

A. Problem Statement:

Generally the usage of vehicle tracking system has been increased rapidly. The major concern of the proposed system is identifying the vehicle theft by implementing anti-system. Vehicle tracking system is beneficial in many ways such as providing security to the personal vehicles, taxis, cabs, school buses/cars and others. Vehicle tracking system is designed to know the position of the vehicle.

II. LITERATURE SURVEY

[1] IOT based mostly time period Vehicle chase System , Abdullah H. Alquhali, MardeniRoslee, Mohamad Y. Alias, Khalid S. Mohamed, during this paper, sensible vehicle chase system, controlled by arduino Uno has been designed and tested with success. so as to supply AN economical chase system, the data provided has to be in real time. AN Arduino module is interfaced to GPS and GSM module and a smart-phone wont to coordinate geographical location of the taken vehicle. The GSM module is employed to send knowledge via web to the ThingSpeak whereby Freeboard receives knowledge from ThingSpeak and show the information in Google maps. By having latitude and line of longitude info, the users will track their vehicles location on any electronic maps platform exploitation the net. The accuracy, exactness and reliableness of the system are analyzed by inserting it in geographical locations with varied accessibility of satellites.

[2] Vehicle Service Management and Live watching With prophetic Maintenance System, Shivang monarch, Abraham SudharsonPonraj, ParimalAbhishek, Deep Shrivastava, during this paper author justify automobile being a very important a part of our everyday life has to be often serviceable for economical operating. Automation with IoT makes the complete expertise of automobile service sensible and quick. on top of planned system not solely manages time period health of our automobile however additionally provides necessary knowledge and predictions to assist U.S.A. confirm the time for next service and approximate price. although this method adds to the service price, however it prevents service centers from charging a lot of and makes client privy to all the modulations done on automobile. All in all, this method saves time and cash of client. Technologies like IoT and RPA has basically altered the means we have a tendency to live and work. it's created our life easier. this method will increase the potency of our automobile and additionally reduces customer's effort at a similar time. By exploitation AI and varied performance enhancing algorithms prophetic analysis is improved.

[3] a sensible time period chase system exploitation GSM/GPRS technologies, Ali Mustafa, Mohammed I. A, Osama A. Awad, this method helps U.S.A. to unravel the matter of chase and watching multi-vehicle in time period through exploitation cheap GPS, GPRS and microcontroller. the value of transition info supported the information size of the HTTP request and therefore the range of HTTP request that embedded system makes it each minute. The reliableness and reliability of this method supported reliableness and reliability of web. The position accuracy depends on the kind of GPS module. this method uses GPS with accuracy around two.5 m and therefore the range of HTTP request that send each minute. exploitation robot application become a lot of acquainted for the user to trace vehicle than internet application as a result of exploitation mobile easier and quicker to use than employing a laptop and out there anyplace at any time.

[4] Development of AN robot based mostly Real Time Bus chase System, Mohammed NazmulHasan and Md. Sharif Hossen, during this analysis study, we have a tendency to style and develop a time period bus chase system exploitation GPS chase technology that wants solely a smartphone and a time period server. This application consists of 2 elementary concepts: initial it collects the time period location info of buses via GPS technology and second updates the situation info within the info server. The bus-side, server-side and client-side modules

offer all the expected functions. Since this application doesn't would like any external hardware except a smartphone that is obtainable to anyone within the world, the price is incredibly low or no price required for chase the bus location. It provides nearly correct knowledge in real time that produces potential for the user to trace the buses.

III. COMPARISION OF EXISTING AND PROPOSED SYSTEM

The commonly used vehicle tracking and monitoring system are based on mobile signal to communicate each other. The technique used for existing system is to track vehicle is commonly used mobile signals, the problem is that when signal is week then vehicle tracking not possible.

So all these disadvantages overcome in the proposed system, to address limitation of existing system is proposed based on GPS, GSM, and mobile phone and android application. The owner will receive a short message sent by GSM module and GPS module sends the latitude and longitude values on owner mobile application.

IV. BLOCK DIAGRAM

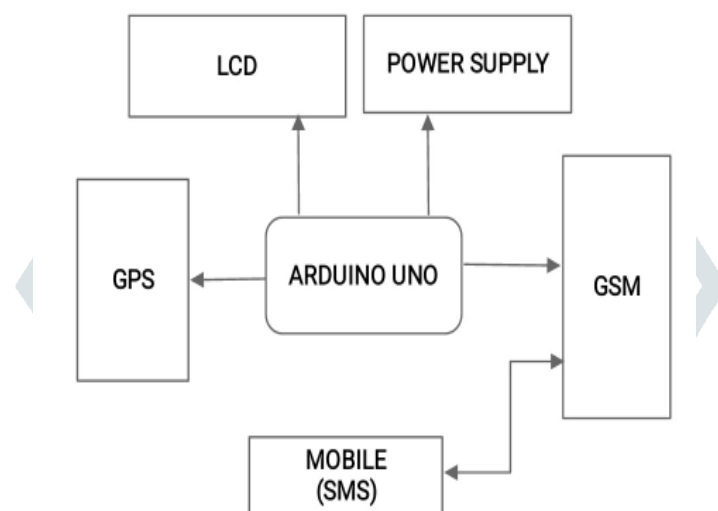


Fig 1. Block Diagram

A. Working:

An economical vehicle chase system is supposed and implemented for chase the movement of any equipped vehicle from any location at any time.

The projected system created sensible use of a most popular technology that mixes a Smartphone application with a microcontroller. this may be simple to form and low cost compared to others.

The designed in-vehicle device works victimization international Positioning System (GPS) and SI system for mobile communication / General Packet Radio Service (GSM/GPRS) technology that is one in all the foremost common ways in which for vehicle chase.

The device is embedded at intervals a vehicle whose position is to be determined and tracked in period of time. A microcontroller is utilized to manage the GPS and GSM/GPRS modules. The vehicle chase system uses the GPS module to induce geographic coordinates whenever we have a tendency to tend to send request.

The Google Maps is utilized to indicate the vehicle location on the map.

Thus, users square measure about to be able to endlessly monitor a moving vehicle on demand by exploit the SMS to the GSM module

V. CONCLUSION

This projected project intends to resolve the matter with long waiting times students of the University face for buses. It's primarily vital to upgrade the present manual Vehicle pursuit and observation system to boost transportation services. For the projected application, GPS primarily based system is employed to observe vehicle any time and GSM is employed to send the latitude and meridian to the server.

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VII. REFERENCES

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