

VEHICLE TRACKING AND SECURITY SYSTEM USING GPS

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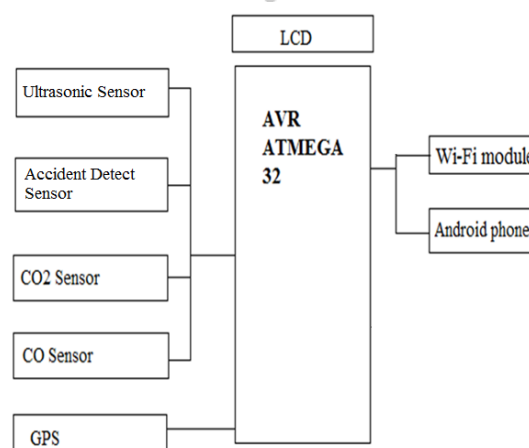
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ABSTRACT— The aim of this project is to propose the low cost hardware unit of monitoring vehicle parameter and tracking by transmitting values to an android phone. A hardware unit is fixed on vehicle's system with android phone. The Wi-Fi module which enables transmission of data. This data further used to monitor the different values of vehicle parameter along with that tracking of vehicle is also possible by enabling the internet connection. A sophisticated vehicle parameter measuring system according to Embedded Board and android application created and implemented for monitoring the vehicle parameter from the whichever location at real-time. The GPS navigation current location from the vehicle GPS transmits the monitoring information towards the server and also the Wi-Fi can be used for delivering alert message to vehicle's owner mobile. 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 vehicle's. Vehicle security and accident prevention is more challenging. So in order to bring a solution for this problem this system can be implemented. Vehicle security enhancement and accident prevention system can be developed through the application of accident detection, pollution control. The need for this project is to provide security to the vehicle's by accident detection. This technique helps to find out the exact location of the accident and with the help of server an emergency vehicle can be sent to the exact location to reduce the human life loss. The place of the vehicle identified using Global Positioning system .This is more secured, reliable and low cost.

KEYWORDS: Sensors, AVR microcontroller, Wi-Fi module, GPS module, Android App.

INTRODUCTION

Nowadays, vehicle navigation and location concept is well defined and frequently used. The simplicity of the communication controllers results from the reduced number of micro-controller driving the communication. Typical applications involving vehicles consists of minimum 14 sensors from which 4 may be considered for analysis like fuel level sensor, co2 sensor, touch plate sensor, co sensor. Moreover, our choice of Android as our operating system platform is consistent with current market trends and shares and user acceptance of such platform. The basic need of is to provide security & safety to the vehicle. This will be accomplished with the help of speed sensor, co2 sensor, co sensor, fuel detection sensors, car accident detection. The main concept in this design is introducing the mobile communications into the embedded system. This will be accomplished with the help of Global System of Mobile wireless communication technology. An efficient automotive security system is implemented for anti-theft using an embedded system occupied with a Global Positioning System and a Global System of Mobile. The client interacts through this system with vehicles and determines their current locations and status using Google Earth. The user can track the position of targeted vehicles on Google Earth. Using GPS locator, the target current location is determined and sent, along with various parameters received by vehicle's data port, via Wi-Fi. We are measure parameter and track the location and all information send to the server. We are use the Wi-Fi module to send the information through server and also give the information in android phone.

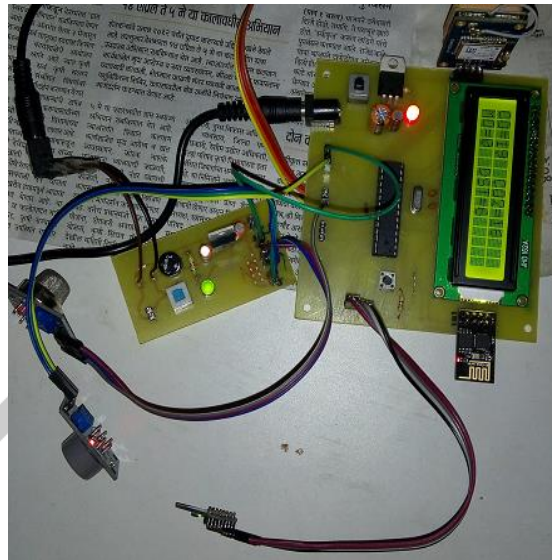


Gas Sensor MQ2:

Sensitive material of MQ-2 gas sensor is SnO₂, which with lower conductivity in clean air. When the target combustible gas exist, The sensor's conductivity is more higher along with the gas concentration rising.

Speed Sensor: Approx. 3.2 x 1.4 x 0.7cm 5mm, Widely used in dynamo speed detecting, pulse counting, Output form: Digital switch output (0 and 1) and Analog for Sensitivity. voltage: 3.3V~5V.

GPS MODULE: Power Supply Range: 3v to 5v Model: GY-GPS6MV2 Ceramic antenna. EEPROM for saving the configuration data when powered off Backup battery LED signal indicator.

WORKING**CONCLUSION:**

In this paper we have proposed concept design of vehicle monitoring and security system. The motivation behind this research is to propose a relatively low cost solution. We are using an android application to access the sensors information based on the Wi-Fi technology. With the help of sensors I could manage the inbuilt GPS to locate the position of any object by refracting the sensor signals how the position of the vehicle is and immediately a message will be sent to the concerned number. This system on successful deployment in the real world will help reduce the major accident to a greater extent. As this system is capable of security offence in real time will reduce the number of accidents and can easily track the culprit.

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