GPS TRACKER AND ALCOHOL DETECTOR WITH ENGINE LOCKING SYSYTEM USING GSM

Masanipalli Kranthi Kumar[1], Tumu Srinivas Reddy[2]

Assistant Professor[1], Associate Professor[2]
Department of ECE
MREC

Abstract- In this project the alcohol is detected by the alcohol sensor MQ3 which is the senses in the car while in case drink alcohol The alcohol sensor senses alcohol and then send a signal to microcontroller which forward a particular signal to GSM ,then the GSM send a message to a particular preregister mobile that the driver is drunk and burger beeping and led is indicated red and then the engine will be lock .if any other person want to drive the then the user send a particular massager to the system and then the system will be unlock but alcohol sensor will continue working. In this way the owner get the real location by receiving the exact position of the car along with the longitude and latitude of that place then it will be copied to the Google map and the location of that car and easily be accessed.

Index Terms-Global System for Mobile(GSM) module, Global Positioning System(GPS), Google map, Microcontroller 328

I. INTRODUCTION

We have seen many news of accidents caused due to drunk and drive. We have designed this project to solve the said problem. The basic functioning of the GPS tracker and alcohol detector project the project is actuated on switching on the vehicle with the help of ignition key. This would actuate the working circuit and make the entire unit in a vigilant mode.

In the GPS based drunk and drive detection project, the system generates an alarm once the level of alcohol measured in above a set threshold value. At the same time engine locking is done with the help of deactivating Relay and DC motor. Also it reads data from the GPS unit which gives the position of the vehicle to microcontroller. Then microcontroller sends sms to the hand held mobile phone with the help of GSM modem. User can click on the link in the received SMS. The integration of the GPS tracker with the Google Maps would ensure that the position of the offender is given out on the

II. EXISTING WORK OR LITERATURE SURVEY

The GPS alcohol detecting and engine locking system using GSM system is complex due to use of ARM control in 2016 the paper and GSM tracking and alcohol detecting system with engine locking system using alcohol detector, but it is not necessary to carry alcohol detector to the owner. Now we design GSM tracking and alcohol detecting system with engine locking system using GSM, Which is the economical. We are various researchers in improving the accuracy of GPS point now we can

maps readily to ensure easy location and possible further action.

Personal digital assistants (PDAs) or handheld computers are generally considered embedded devices because of the nature of their hardware design, even though they are more expandable in software terms. This line of definition continues to blur as devices expand. With the introduction of the OQO Model 2 with the Windows XP operating system and ports such as a USB port — both features usually belong to "general purpose computers", — the line of nomenclature blurs even more.

Embedded systems plays major role in electronics varies from portable devices to large stationary installations like digital watches and MP3 players, traffic lights, factory controllers, or the systems controlling nuclear power plants.

In terms of complexity embedded systems can range from very simple with a single microcontroller chip, to very complex with multiple units, peripherals and networks mounted inside a large chassis or enclosure.

simply find the car location using the Google map. Google map web mapping service developed by Jens Eilstrup Rasmussen. It provides turn by turn navigation dedicated parking assistance feature. It is primarily available on the mobile.

Power Supply Section: This section is meant for supplying Power to all the sections mentioned above. It basically consists of a Transformer to step down the 230V ac to 9V ac followed by diodes. Here diodes are used to rectify the ac to dc. After rectification the obtained rippled dc is filtered using a capacitor Filter. A positive voltage regulator is used to regulate the obtained dc voltage.

Microcontroller Section:This section forms the control unit of the whole project. This section basically consists of a Microcontroller with its associated circuitry like Crystal with capacitors, Reset circuitry, Pull up resistors (if needed) and so on. The Microcontroller forms the heart of the project because it controls the devices being interfaced and communicates with the devices according to the program being written.

LCD Display Section: This section is basically meant to show up the status of the project. This project makes use of Liquid Crystal Display to display / prompt for necessary information.

Alcohol sensor:Alcohol sensor is used to sense alcohol presence in surrounding atmosphere, it works on principle of conductivity if alcohol percentage increases then conductivity increases then output of alcohol sensor changes thus this change is given to microcontroller to detect alcohol presense.

DC Motor:DC motor is an output for this project. And DC motor is connected to microcontroller. And this motor controlled by the microcontroller with the respective inputs given by us. Its speed will be varied according to the speed set by the switches.

III.PROPOSED WORK

Subscriber Roaming: When a mobile subscriber roams into a new location area (new VLR), the VLR automatically determines that it must update the HLR with the new location information, which it does using an SS7 Location Update Request Message. The Location Update Message is routed to the HLR through the SS7 network, based on the global title translation of the IMSI that is stored within the SCCP Called Party Address portion of the message. The HLR responds with a message that informs the VLR whether the subscriber should be provided service in the new location.

Mobile Subscriber ISDN Number (MSISDN) Call Routing: When a user dials a GSM mobile subscriber's MSISDN, the

PSTN routes the call to the Home MSC based on the dialed telephone number. The MSC must then query the HLR based on the MSISDN, to attain routing information required to route the call to the subscribers' current location. The MSC stores global title translation tables that are used to determine the HLR associated with the MSISDN. When only one HLR exists, the translation tables are trivial. When more than one HLR is used however, the translations become extremely challenging; with one translation record per subscriber (see the example below). Having determined the appropriate HLR address, the MSC sends a Routing Information Request to it. When the HLR receives the Routing Information Request, it maps the MSISDN to the IMSI, and ascertains the subscribers' profile including the current VLR at which the subscriber is registered. The HLR then queries the VLR for a Mobile Station Roaming Number (MSRN). The MSRN is essentially an ISDN telephone number at which the mobile subscriber can currently be reached. The MSRN is a temporary number that is valid only for the duration of a single call. The HLR generates a response message, which includes the MSRN, and sends it back across the SS7 network to the MSC. Finally, the MSC attempts to complete the call using the MSRN provided

GSM MODEM:This is a GSM/GPRS-compatible Quad-band cell phone, which works on a frequency of 850/900/1800/1900MHz and which can be used not only to access the Internet, but also for oral communication (provided that it is connected to a microphone and a small loud speaker) and for SMSs. Externally, it looks like a big package (0.94 inches x 0.94 inches x 0.12 inches) with L-shaped contacts on four sides so that they can be soldered both on the side and at the bottom. Internally, the module is managed by an AMR926EJ-S processor, which controls phone communication, data communication (through an integrated TCP/IP stack), and (through an UART and a TTL serial interface) the communication with the circuit interfaced with the cell phone itself. The processor is also in charge of a SIM.

GPS TECHNOLOGY:Global Positioning System (GPS) technology is changing the way we work and play. You can use GPS technology when you are driving, flying, fishing, sailing, hiking, running, biking, working, or exploring. With a GPS receiver, you have an amazing amount of information at your fingertips. Here are just a few examples of how you can use GPS technology.
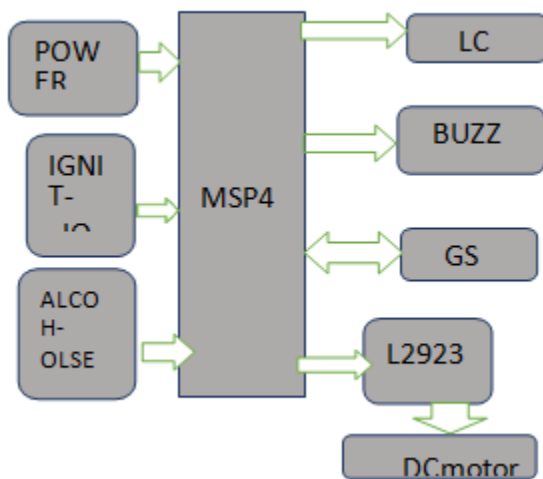
IV.RESULTS AND DISCUSSION

If alcoholic person tries command on vehicle the alcoholic sensor determines the existing of alcohol and shut down the vehicle engine and sound alarm by which the nearby people will exchange the seat. Peoples are aware of situation by the help of

LCD screen present in the vehicles and hence take required action.We can avoided any kind of loss of life by using this system. All equipments are totally tested and connected as required thereby giving us the much needed

Most law enforcing agents would need to monitor the alcohol level of drivers and integrating the device to better manage people and vehicles are the need of the hour. Moreover there are a lot of situations when people need to be reassured of their safety on the roads while hailing a third party serviceprovider like a taxi or a radio cab. Thus the need for a safety device as demonstrated in the project is felt by most peOple availing of such services.

The Keil Software 8051 development tools listed below are the programs you use to compile your C code, assemble your assembler source files, link your program together, create HEX files, and debug your target program.   µVision2 for Windows™ Integrated Development Environment: combines Project Management, Source Code Editing, and Program Debugging in one powerful environme

v.CONCLUSION

An effective solution is provided to develop the intelligent system for vehicles which will sense the various levels of alcohol present in the breath of the driver and would respond accordingly. The system adopted different principles as explained in this paper, by using hardware platform who's Core is Atmega8, Alcohol sensor mq3, GPS & GSM module. The communication with preregistered phone numbers in this designed system is done via GSM, GPS and control of various parameters. The whole control system has the benefit of small volume and high reliability. Future scope of this system is to decrease accident numbers and providing useful details about the accidental vehicle, thereby reducing the rate of accidents taking place due to drunken driving. This system brings modernization to the existing technology in the vehicles and also maintains and improves the safety features, hence proving to be an effective development in the automobile industry.

GPS alcohol detecting and engine locking system using GSM system has been successfully implemented. This system divided into three sub system GPS, GSM and Arduino Uno subsystem. When the MQ3 sensor are detecting the alcohol in the car then beeping a sound in car that means altering to driver and GPS is use for the position of the car in the from longitude and latitude format. This longitude and latitude are receiving by the GSM with help of Arduino Uno system GSM forward this information to the user or owner mobile number who is preregister and then the user can be tracker location of the car and the Engine of the car will be lock

REFERENCES

1.International Journal of Advance Research in Computer Science and Management Studies Volume 3, 9 Sep 2015.

2.BaburaoKodavati, V.K.Raju, S.SrinivasaRao, A.V.Prabu, T.AppaRao

3.Dr.Y.V.Narayana/ International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622 www.ijera.com Vol. 1, Issue 3, pp.616-625

4.Driver Behavior Monitoring through Sensors and Tracking the Accident using Wireless Technology", IJCA (0975 – 8887), Volume 102, page no.2 Sep2014