



## International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 5, Issue 4, April 2017

# Novel Security Enabled Zone Sensing System for Vehicle using Wireless Technology

Darshan G S

M.Tech Student, Dept. of C.S., P.E.S College of Engineering, Mandya, India

**ABSTRACT:** The standard explanation behind this wander is to keep away from vehicle theft. This convenience is proficient by perceiving vehicle status in theft mode and by sending a SMS which is delivered actually. This SMS is then sent to the proprietor of the vehicle. The proprietor can then send back the SMS tin demand to weaken the begin of the vehicle. Thusly in this manner wrongdoings can be diminished, taking all things into account, as vehicles today are being stolen in limitless number. Subsequently, vehicles today require high security which can be expert with the help of this application. How the structure capacities is the time when a man tries to take the vehicle, the microcontroller is ruined and the summon is sent to the GSM modem to send SMS. On the receipt of the message, the proprietor sends back the SMS to the GSM modem. This is done to stop the engine. This GSM modem is interfaced to the microcontroller. This microcontroller on the receipt of the message uses a framework that stops the engine. Motor is being used as a piece of this wander with a particular ultimate objective to show vehicle ON/OFF state. There has been a colossal augmentation in street disaster properly of tiredness of driver while driving which prompts tremendous risky difficulties .The driver lose his control when he falls rest which prompts scene .This is by sensibility of when the driver is not set up to control his vehicle at energetic out on the town. This wind can make a model which can oust such scenes. In India different mischances are acknowledged in perspective of human remissness. Name conspicuous verification and certification is a key procedure in most by a wide margin of the development related applications, for example, flag hopping street activity observing. In this wander can create a model which can prevent, for example, vehicle theft, accidents, and flag Jump.

**KEYWORDS:** GSM, GPS, Eye Blink sensor, RF Tx & Rx.

### I. INTRODUCTION

In the latest decade, heaps of events like drivers weariness in the midst of driving and vehicle burglary activity which causes social continuous issue like setbacks and various more dangers conditions are going on. This will raise the issue of our prosperity and security in both open and private parts. So there is a need of ceaseless watching and taking after of vehicles. In the urban domains, the accompanying structure gives a totally robotized taking after and seeing of the vehicle which is helpful for vehicles, vehicle's proprietors, and adventurer's security and moreover it gives the particular range of vehicle. Finally the accompanying system gives straightforward after plan using composed embedded structure. Vehicle following and motoring the framework is the advancement used to choose the region of a vehicle using unmistakable devices like GPS GSM and Renesas microcontroller. It can be seen on electronic maps with the help of programming by methods for Internet. Vehicle taking after structure is a basic gadget for taking after each vehicle at a given time allotment and starting late it is twisting up clearly continuously renowned for people having expensive automobiles and subsequently strong in thievery neutralizing activity and recuperation of the vehicle. The structure includes introduce day gear and programming portions enabling one to track their vehicle on the on the web or disconnected. The driver rest down or not checking by IR Sensors and Identifying Signal Jumping vehicle utilizing RF TX and RX.

# International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 5, Issue 4, April 2017

## II. RELATED WORK

- In Previous strategies When the vehicle interacts with an outer question or interloper the vibrating framework creates a caution and alarms the proprietor. In the event that the proprietor is adjacent then he can check what has happened. Be that as it may, if the proprietor is far from the vehicle then the vibrating framework will keep on alerting until the vehicle close down. This goes about as an aggravation to the general population close-by and furthermore causes commotion contamination. In addition, the vibrating framework is sensitive to the point that it produces an alert when it rains or even because of the vibrations of the vehicles cruising by. Additionally the general inclination of people is that while strolling out and about they tend to touch the vehicles stopped by the roadside. Despite the fact that all these positively are not security issues, the vibrating framework pointlessly alarms the proprietor. This is the real disadvantage of vibrating framework. Each auto is furnished with a remote to bolt and open the entryway utilizing a specific IR recurrence. Be that as it may, in the event that somebody might get the remote with a similar IR recurrence, then the auto can be effectively stolen. This is the significant downside of remote control framework.
- The exhibit innovation utilized for tiredness location depends on yawning discovery which is controlled by the adjustments in the geometrical elements of the mouth. This innovation utilizes an Image Processing framework to monitor changes in the facial components. In any case, the real downside of this innovation is that yawning need not infer that the driver is sleepy. Also, this framework just cautions the client through notice message upon the discovery of tiredness and it is not making any outstanding move when the driver dismisses the messages and he is as yet sleepy.
- The regular technique used to maintain a strategic distance from this issue is front light tilting system in which a mechanical change is utilized to tilt the fog light in order to decrease glairiness. However, for appropriate operation the tilt point must be differed as a component of separation between the vehicles and this operation must be done physically. It is the real downside of this component.

## III. PROPOSED SYSTEM

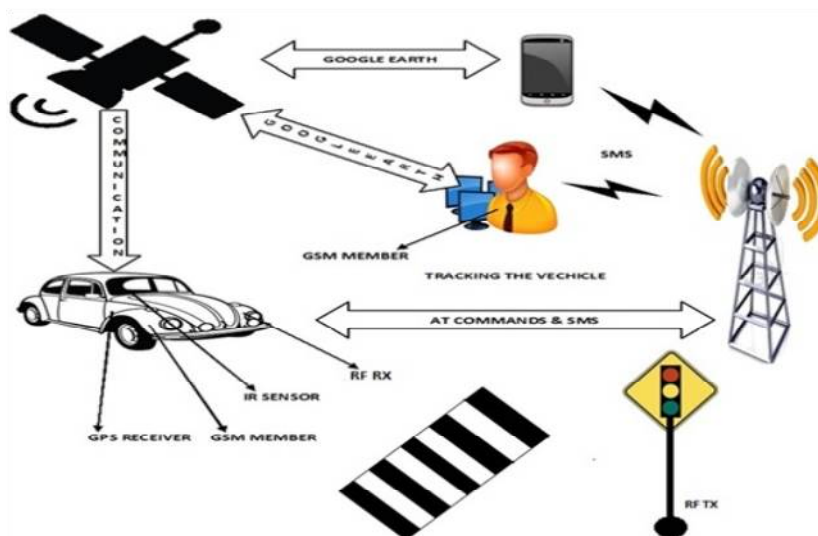


Figure. 1. Block diagram



# International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 5, Issue 4, April 2017

The figure. 1., contains essentially sensors, GSM module, GPS module Renesas microcontroller, IR Sensors, Eye Blink Sensor, RF TX and RX, Android Mobiles and Power supply module. These modules are coordinated to do a solitary assignment. The proposed framework is controlled with Renesas microcontroller. At first Vehicles robbery then begins the entire operation. After that GPS and GSM SIM900 module speak with Renesas microcontroller. The scopes and longitudes current position of the vehicle gotten from GPS get in Android Mobile . The ready back rub will be sent to the proprietor portable utilizing GSM module to track the vehicle, and this framework furnishes travelers wellbeing with the Drowsy Driver Detector by utilizing IR Sensors, Eye Blink Sensors and RF labels are utilized to recognize the Traffic flag infringement Alertness. These sensors get interface with Renesas Microcontroller.

## A. GSM Module (SIM 900)

SIM900 is a Tri-band GSM/GPRS engine that tackles frequencies EGSM 900 MHz, DCS 1800 MHz and PCS 1900 MHz. SIM900 highlights GPRS multi-opening class 10/class 8 (optional) and supports the GPRS coding arranges CS-1, CS-2, CS-3 and CS-4. You can use AT Command to get information in SIM card. The SIM interface supports the handiness of the GSM Phase 1 detail and moreover supports the convenience of the new GSM Phase 2+ assurance for FAST 64 kbps SIM (expected for use with a SIM application Tool-kit).Both 1.8V and 3.0V SIM Cards are maintained. The SIM interface is controlled from an inside controller in the module having apparent voltage 2.8V. All pins reset as yields driving low. The "AT" or "at" prefix must be set toward the begin of each summon line. To end a charge line enter <CR>. Summons are for the most part trailed by a response that includes."<CR> <LF> <response> <CR> <LF>". All through this record, only the responses are displayed, <CR><LF> are disposed of purposely.

Command	Possible responses
AT+CGMI	FLYFOT MODEM OK
Note: Get manufacture identification	Note: Command valid, FLYFOT modem
AT+CGMI=?	OK
AT+CGMI? AT+CGMI=1	+CME ERROR 3 Note: not support

Table 1 Commands

## B. Global Positioning System(GPS)

The Global Positioning System(GPS) is a structure in perspective of overall course satellite system(GNSS) that give reliable region and time information at untouched in any whether condition on earth. It is made out of an arrangement of 24 satellites of the United States which are heretofore used as a piece of military organizations, and later considered business use. The satellite release radio banner of short heartbeats to GPS beneficiary once in a while. A GPS recipient gets the movement from no under four satellites to enlist its three estimation position that is degree, longitude and stature. Thusly GPS is a key development for finding a contraption zone. We used SIM 908 merge module of GPS and GSM.

## C. Eye Blink Sensor

The squinting of eye is basic in this wander, since it is utilized to drive the contraption and to work events. Eye squint area must be done, for which we can profit instantly available squint pointers (Catalog No. 9008 of Enable devices) or we can go along with it with a remarkable course written in picture taking care of that, if there is no eye best improvement found for the particular time of fated i.e. time more essential than the human eye flashing time then consider an event

# International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 5, Issue 4, April 2017

called "glint", for which the arrangement of operations will be taken after. Here, in this wander we require to set time as 5 second or above it, as "gleam event" is not the same as "consistent eye squinting". We need to lead testing for simply flash event, and not to find ordinary gleaming of human eye.

## IV. RESULT

In this level incorporation of the equipment segments into Android Application. Here we utilizing Renesas Microcontroller connecting between all Modules. GSM Module (SIM 900) use for informing. GPS Module use for Global Position. vibration sensor is fit for measuring vibration. IR Sensor and Eye Blink Sensor use for Drowsiness location. RF TX and RX use for recognizing vehicle flag Jump. In Android Application we can stop the vehicle and see correct position utilizing goggle Map.



Figure. 2. Snapshot of overall diagram

## V. CONCLUSION

In novel Security Enable Zone Sensing System for vehicle using Wireless Technology is ending up noticeably progressively imperative in expansive urban areas. For vehicle security against hoodlum this framework is especially critical. GSM and GPS are incorporated to track the position of vehicle at remote place with the assistance of Android App. Through SMS vehicle can be killed from remote place. Alongside burglary insurance three vital elements are included this framework, which are not seen in a large portion of vehicles. To start with highlight is Drowsiness Detection Buzzer alarm and SMS ready which is essential to ensure the Owner when he nods off. Second one is SMS caution and Buzzer alarm for Vibration Detection all together screen Vehicle from remote place when it is stopped in Parking Places. Third one Signal Jump condition, when any of the vehicle bounced the flag when flag status is Red. The framework shows flag bounce condition alongside the ringer alarm. This framework is relevant in a moving vehicle and open/private transport organizations.



ISSN(Online): 2320-9801  
ISSN (Print): 2320-9798

# International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 5, Issue 4, April 2017

## VI. FUTURE WORK

In future this system can be changed for incident acknowledgment and its avoidance by using Accelerometer and additional sensors. Close by mystery word protection if thumb affirmation and face affirmation is used then security against burglary can be advanced. If driver in Drowsiness mode then sensor will perceived then back off the speed of vehicle then actually ceasing. A structure can be upgraded by using a pack methodology to track the vehicle. The system can be used further to take interest.

## REFERENCES

1. Suraja P Joy, Sowmiya devi V R, Sneha A, Deepak S, Abin Jhon Raju, 'A Novel Security enabled speed monitoring System for two wheels using wireless Technology', International Conference on Circuit, Power and Computing Technologies, in IEEE 2016
2. Champa Bhagavathi R, Gowri B R, Kasturi R, Pooja C 'Vehicle Theft Detection and Prevention using GSM & GPS', In IJIRCCE, 2016.
3. Rajasekar R, S Vanangamudi, Pattni "Drowsy driver sleeping device & driver alert System", In IJSR, 2014.
4. Shaikh J.A, Shubhangi A. Mali "Advanced Authentication and Security System For Call Centre Employee's With Live GPS Tracking" International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (An ISO 3297: 2007 Certified Organization) Volume. 3, Issue 7, pp 10533-10536, July 2014
5. W. Shi Y. Liu in "Real-time urban traffic monitoring with global positioning system- equipped vehicles" , IET Intelligent Transport Systems, volume 4, Issue 2, pp.113-120, 2010.

## BIOGRAPHY

**Darshan G.S** is a final year student of Master of Technology (M.Tech) Pursuing in Computer Engineering, P.E.S college of Engineering, Mandya, Karnataka, India. he received Bachelor of Engineering (BE) in 2015 from Maharaj Institute of Technology Engineering College, Mysuru, Karnataka, India. His research interests are Embedded System, Android application, IOT, Web2.0 etc.