Arduino using car tracking

Sayali Waghmare[1], Dipali Dande[2], Shweta Murkute[3], Vishakha Munde[4], Prof.N.S.Patil[5]

[1,2,3,4] *Student, Computer Engineering Department, Marathwada Mitra Mandal Polytechnic, Pune.*
[5] *Prof.Niraj.S.Patil, Computer Engineering Department, Marathwada Mitra Mandal Polytechnic, Pune.*

ABSTRACT

The tracing system is the latest technology to finding exact position or location of the car. The may be people facing difficulties to product are not delivery for particular time. This product or delay may due drivers are sinking long or incorrect root to great time to deliver the product .The using GPS-GSM shield are connected to the Arduino to find the position of the car. The design and complement of recent GPS tracing system using Arduino. When a person use the GPS(Global Position System) to find the position connected to the Arduino the user are accept and receiver the longitude and latitude of the car to find the exact position. This construct for the finding proper location of the car or vehicle.

Keyword : - *Arduino, car, tracking, position, location, GPS, GSM*

1. INTRODUCTION

The advance in technology, there has required more usage of tracking system. The vehicle tracking system lie in shipping industry.GPS is real time tracking system. Its construct to display the exact position of car on android phone. The Arduino and GPS (Global position system) , GSM (Global System For Mobile) modules manager the inside the car. In this way; the car position is reported every time to track the car in android phone. This system is important to recent day to finding the exact location of the car. Car tracking using two modules GPS & GSM. GPS module can be use for vehicle accident detection. GPS is one of the most common way of vehicle tracking.

This technology is the most useful to the people to tracking car and popular in a new generation t give the security of the car. If the car are stolen, then using the tracking system or GPS module finding this car and report to the police from take future action. through users make request, to the GPS coordinates of the car are sent to a specified mobile. The provided models give the particular longitude and latitude of the particular position can seen in google map. When the driver then using tracking technology find the exact location of the car. Car tracking using uno Arduino. Arduino is the main processing unit using whole system control.

2. RELATED WORK

Using the Arduino, GPS and GSM to track the correct position of the car. The hardware and software are GPS and GSM network are already been develop. GPS are the global position system that is search the location. GPS is any where available to finding the location. In this GPS module are using in the tracking system to give location.GPS based system is the satellite based system to carry the data. A GPS tracker is essentially contains a GPS modules to receive the GPS signal and calculate the co-ordinates. The GPS receiver are receiver the information of the data using the satellite signals. This signal are finding the exact position of the car. In the model TX and RX are connected to the Arduino. This connection are give the location to the exact position.

GSM is stand for Global System for Mobile communication. It is widely used the GPS system. This system is develop for communication purpose. Its required the SIM to give the information and receive the network data for the system. The GSM network are transmission of SMS sending and receiving the data. GSM that is the using in this system that using the SIM to receive the information about the car tracking the system.

Arduino are hardware and software operation are perform. It's the microcontroller module for develop digital device. This technology are provided security to the car. The Arduino are different GPS and GSM using develop the tracking system. This system are latest technology to finding the exact position of the vehicles. The Arduino are

using make the many effective product that used in real time. The Arduino are 5v pin are give the red power line on the board and GND pin are display blue power of the board. This system are most effective the people for the where car is present that display in the android phone.

2.1 Arduino Module

Arduino is open source computer system to using hardware and software. Its the required more digital connection to the module. Arduino are many types like Arduino Uno, LilyPad Arduino, red board, Arduino mega (R3), Arduino Leonardo etc. The Arduino based design the many electronic system in real time. Its the most latest technology to use in new generation. Arduino are also software application that perform many languages like java, advance java, c , c++ etc. It's written any programming language in the code. The Arduino project has facilities the publication of may free software of libraries.
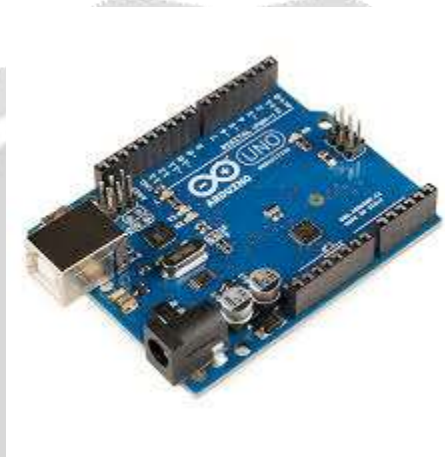

Fig -1: Arduino

2.2 GPS MODULE

GPS (Global Position System) is the most useful system to finding the location. This location are finding to satellite signal. This location are display the proper location of exact position. The GPS module is cannot required any type of data to find the location. The GPS provided critical positioning capabilities to commercial user. This system are freely use and accessible the anyone. The GPS mainly develop for time and find position of specification. GPS satellites continuously transmit data about current position. This module are continuously broadcast signal.

Fig -2: GPS Module

2.3 GSM MODULE

GSM (Global system for mobile communication). It's the standard security system. GSM modules are use SIM to send and receive the data. The GSM are uses the several cryptography algorithm.GSM are cellular network. That module are using the tracking system to send the data. The GPS are send the satellite signal for the GSM system then this system are send the SMS to the android phone then people take the particular action for this SMS.

Fig -3: GSM Module

3. PROPOSED WORK

The propose a car tracking system for tracking the car using GPS and GSM modules. The GPS are receive the exact position and GSM modules are send and receive the SMS to the android phone. Therefore, the GPS system are send the longitude and latitude value the coordinate GSM model to proper people. This system are installed in the car than simultaneously display the position of the system. The GPS modules are network receive the satellite signal to give the location of the position. This technology are more effective in real time.

Example the package are deliver to the particular user that time are good to deliver if the driver are take the long or incorrect root to the deliver the product or package. When the using the tracking system in the car then give the proper detailed for this car. Therefore this system are most useful for the generation.
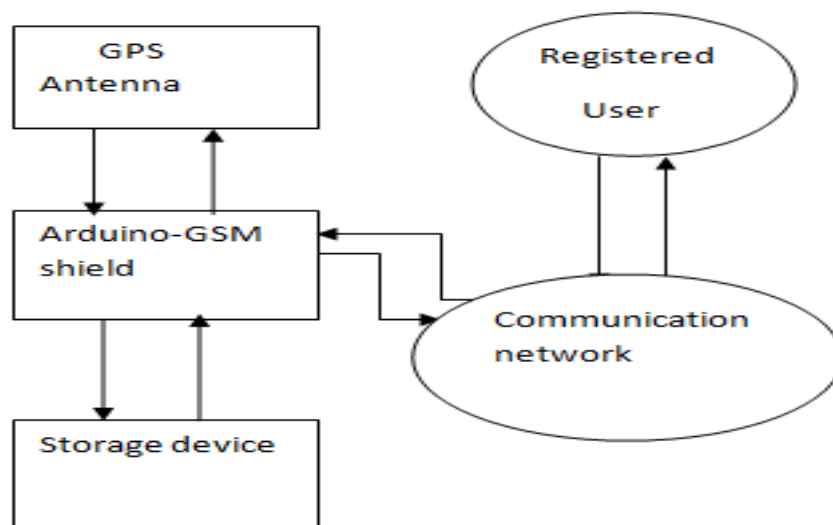

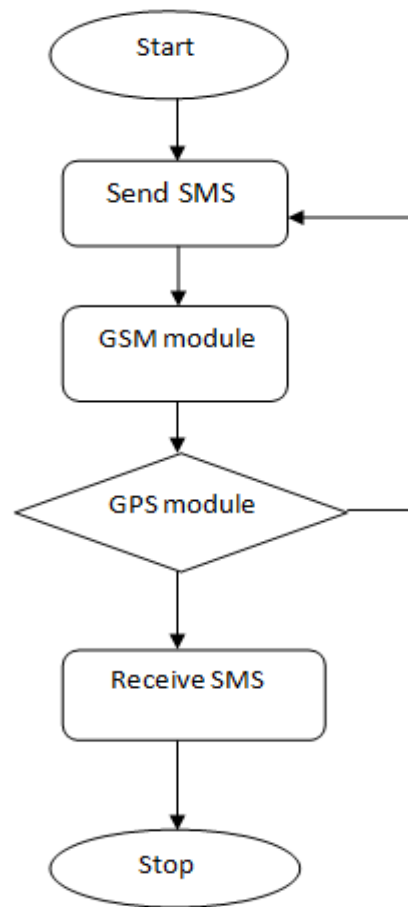**Fig -4**: Architecture of Real Time GPS Tracing System

4.WORK FLOW

Fig -5: flow of Tracking Car

5. CONCLUSION

This system is the most popular security and safety purpose to develop. Car tracing is the most useful and secure required to another system. Its also more required to another organization to help advance transposition system and security for the organization purpose. It also use the different addition features like sensor give more and effective security to the system. This system are required to increasing the large cities to broadcast the technology. This give more alert features to play the important and effective role in day to day life.

6. REFERENCES

1. Albert Alexe, R. Ezhilarasie, "Cloud Computing Based Vehicle Tracking Information Systems", ISSN: 2229 - 4333 (Print) | ISSN: 0976 - 8491 (Online) IJCST Vol. 2, Issue 1, March 2011.

2. Ambade Shruti Dinkar and S.A Shaikh, Design and Implementation Of Vehicle Tracking System Using GPS, Journal of Information Engineering and Applications, ISSN 2224-5758, Vol 1,No.3, 2011.

3. Albert Alexe, R. Ezhilarasie, "Cloud Computing Based Vehicle Tracking Information Systems", ISSN: 2229 - 4333 (Print) | ISSN: 0976 - 8491 (Online) IJCST Vol. 2, Issue 1, March 2011

4. GPS, Journal of Information Engineering and Applications, ISSN 2224-5758, Vol 1,No.3, 2011.

5. Asaad M. J. Al-Hindawi, Ibraheem Talib, "Experimentally Evaluation of GPS/GSM Based System Design", Journal of Electronic Systems Volume 2 Number 2 June 2012.

6. Vikram Kulkarni & Viswaprakash Babu, "embedded smart car security system on face detection', special issue of IJCCT, ISSN (Online):2231-0371,ISSN(Print):0975- 7449, volume-3, issue-1.

7. Kai-Tai Song, Chih-Chieh Yang, of   National ChiaoTung University, Taiwan, "Front Vehicle Tracking Using Scene Analysis", Proceedings of the IEEE International Conference on Mechatronics & Automation 2005.

8. Chen Peijiang, Jiang Xuehua, "Design and Implementation of Remote monitoring system based on GSM," vol.42, pp.167-175. 2008.

9. Kunal Maurya, Mandeep Singh, Neelu   Jain, "Real Time Vehicle Tracking System using GSM and GPS Technology- An Anti-theft Tracking System," International Journal of Electronics and Computer Science Engineering. ISSN 2277

10. V. Ramya, B. Palaniappan, K. Karthick, "Embedded Controller for Vehicle In-Front Obstacle Detection and Cabin Safety Alert System", International Journal of Computer Science & Information Technology (IJCSIT) Vol 4, No 2, April 2012.

11. http://www.mouser.com/ds/2/737/adafruit-fona-808-cellular-plus-gps-shield-for-ard-765048.pdf https://www.adafruit.com/product/1991.

12. https://www.researchgate.net/publication/319345188_Real_Time_Vehicle_Tracking_Using_Arduino_Mega [accessed Mar 04 2018].