ABSTRACT
This project work is to design a tracking location the vehicle. This is use the global positioning system to detect the location vehicle or other asset to which it is attached and using GSM modem this information can be transmit to remote user. The use of GSM and GPS technologies allows the system to track object and provides the most up-to-date information about daily life. If a password like SMS is sent by other people, it automatically stops the vehicle or we can use it for different other work, it can provide real time control. This system finds its application in real time traffic control, current system can be able to provide process from anywhere. This system is integrated with GPS-GSM to provide following feature: a) Location information, b) Real time tracking using SMS, c) tracking cars driver activity.

Keywords – Microcontroller, Gsm Modem, Gps Module, Max-232.

INTRODUCTION
In Vehicle tracking project, can track the longitude and latitude of vehicle. This project give back update about vehicle location send the sms through GSM modem. Microcontroller is the processing unit CPU of our project. Microcontroller gets the coordinates from GPS modem and then it send information to user in the text SMS. GSM modem is used to send this information with the help of SMS. SMS will be sent to owner of the vehicle.

HARDWARE DISCRIPTION
Hardware framework for tracking system is shown in bellow. A tracking system will provide effective real time information of vehicle location. Tracking system will inform where are your vehicle is and how longer it has been there. The basic function of in vehicle unit is to acquire, Monitor and transmit the position latitude & longitude time to management center either at fixed interval or on demand. Microcontroller unit form the heart of tracking unit, which acquires and process the position data from the GPS module. The GPS receiver of vehicle terminal receives and resolves the navigation message broadcasted by GPS position satellites, computes the longitude and latitude of vehicle coordinates, transforms it into the GSM message form by GSM communication controller, and sends the message to monitoring center via the GSM network.

GSM HARDWARE

The core of data communication about this system lies in wireless communication control terminals that uses GSM Modules to transfer long-distance data extensively and reliably. It Support instructions of AT commands. SIM300 can be integrated with a wide range of applications. SIM300 is a Tri-band GSM/GPRS engine that works on frequencies EGSM 900 MHz, DCS 1800 MHz and PCS 1900 MHz.
SIM300 provides GPRS multi-slot class 10 capabilities and supports the GPRS coding schemes CS-1, CS-2, CS-3 and CS-4. With a tiny configuration of 40mm x 33mm x 2.85 mm, SIM300 can fit almost all the space requirement in our application.

**GPS RECEIVER**

The hardware interfaces for GPS units are designed to meet NMEA requirements. The GPS receiver provides data in the NMEA 0183 format with a 1Hz update rate. Generally, message received by GPS is in NMEA [National Marine Electronics Association] message format and NMEA protocol which is most commonly used is NMEA0183 protocol. GPS sentences beginning with the following specifications: $GPGGA, $GPGSA, $GPGSV, $GPRMC, and $GPVTG.

**MICROCONTROLLER**

- A smaller computer.
- On-chip RAM, ROM, I/O ports.

Example ARM perfectly fits many uses, from automotive industries and controlling home appliances to industrial, instruments, remote sensors, electrical door locks and safety devices. It is also ideal for smart cards as well as for batteriesupplied devices of its low consumption EEPROM memory makes it easier to apply microcontrollers to devices where permanent storage of various parameters needed. Low cost, low consumption, easy handling and flexibility make ARM applicable.

The LPC2131/2132/2134/2136/2138 microcontrollers are based on a 32/16 bit ARM7TDMI-S CPU with real-time emulation and embedded trace support, that combines the microcontroller with 32 kB, 64 kB, 128 kB, 256kB and 512kB.

**METHOD**

Microcontroller is the central processing unit CPU of our project. Microcontroller gets the coordinates from GPS modem and then it sends this information to the user in Text sms. GSM modem is used to send this information via SMS. SMS will be sent to the owner of the vehicle. This project consists of following blocks:

1) GPS Modem.
2) GSM Modem.
3) Microcontroller.
4) LCD Display.
RESULTS AND DISCUSSION

Complete system as shown in above contains complete connection of 32-bit ARM processor along with GSM and GPS system. The positions are displayed in requesting cell phone display. With this system it becomes easy for the users to keep track of their objects. If the object resides in any location positional data in terms of latitude and longitude can easily be traced out also we can control our vehicle by password like #0 and #1 tracking system. The message sending and receiving by cell-phone.

CONCLUSION

Tracking system is becoming increasingly important in large cities and it is more secured than other systems. It is completely integrated so that once it is implemented in all vehicles, then it is possible to track anytime from anywhere. It has real-time capability, emerges in order to strengthen the relations among people, vehicle and road by putting modern information technologies. together This system has many advantages such as large capability, wide areas range, low operation costs, effective, Strong expandability and Easy to use in vehicle traffic administration. Upgrading this setup is very easy which makes it open to future a requirement which also makes it more efficient.

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