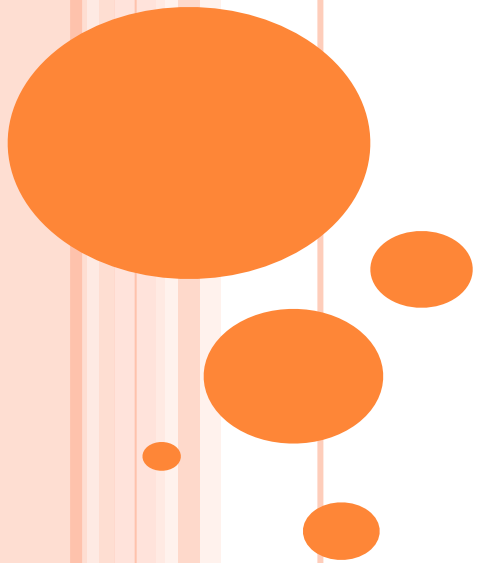# GSM and GPS based Vehicle tracking system
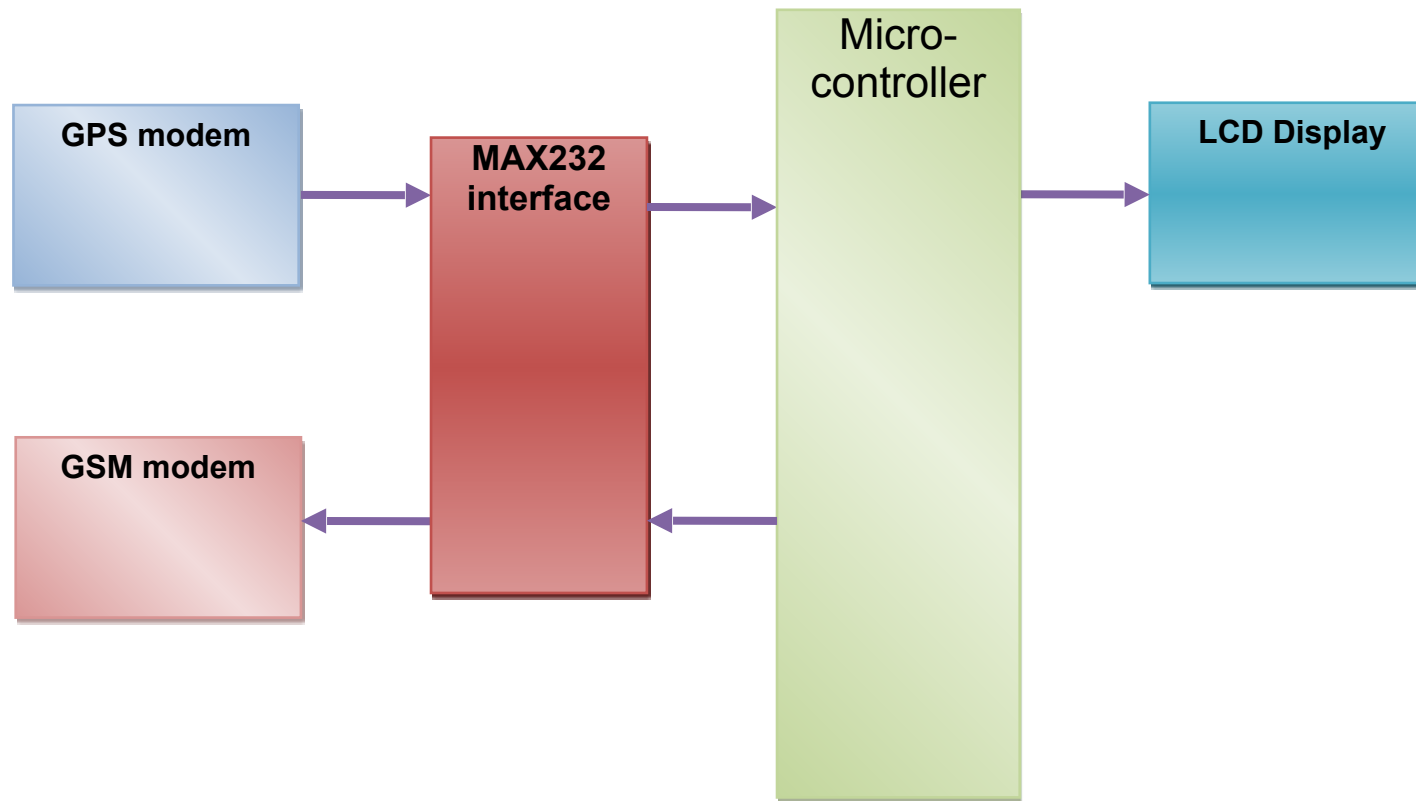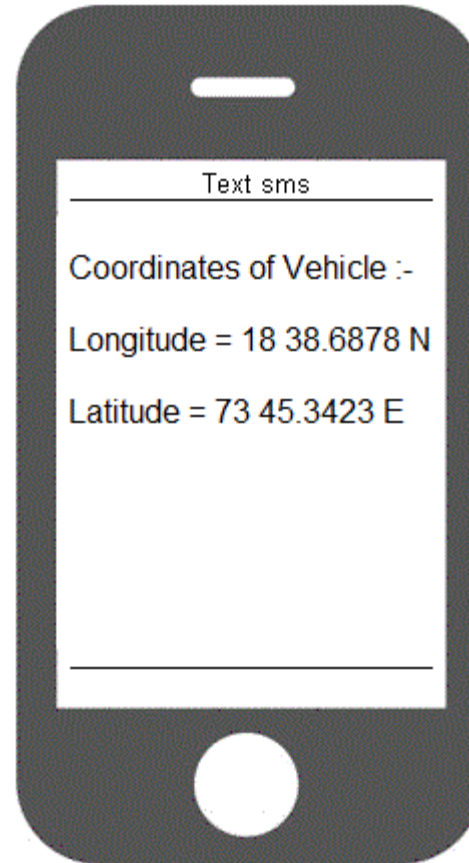
1. INTRODUCTION

Project Aim :

◦ This project monitors the vehicle location using it's longitude and latitude. We have designed a microcontroller based prototype model for the vehicle tracker.

◦ For monitoring the location, we have used a SR86 GPS modem which responds to the changes in the location.

◦ We have also used GSM modem to send the location tracking SMS.

◦ The heart of the project i.e. the microcontroller is AT89s51.

◦ The display used 16×2 line Liquid Crystal Display.

◦ MAX232 has been used for the interfacing between microcontroller and GPS & GSM modem. With the help of this IC we can send the data to the GPS and GSM modem also.

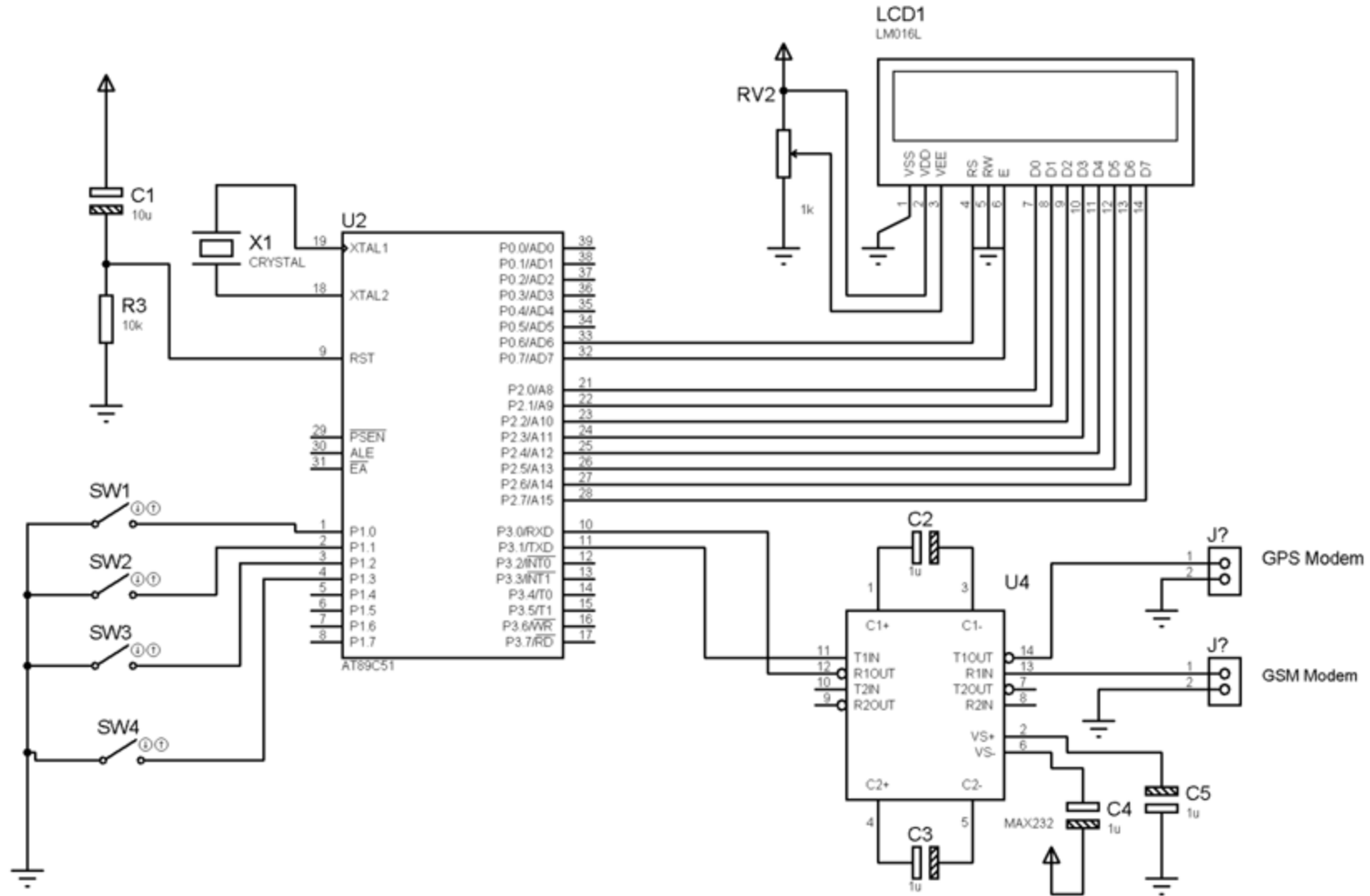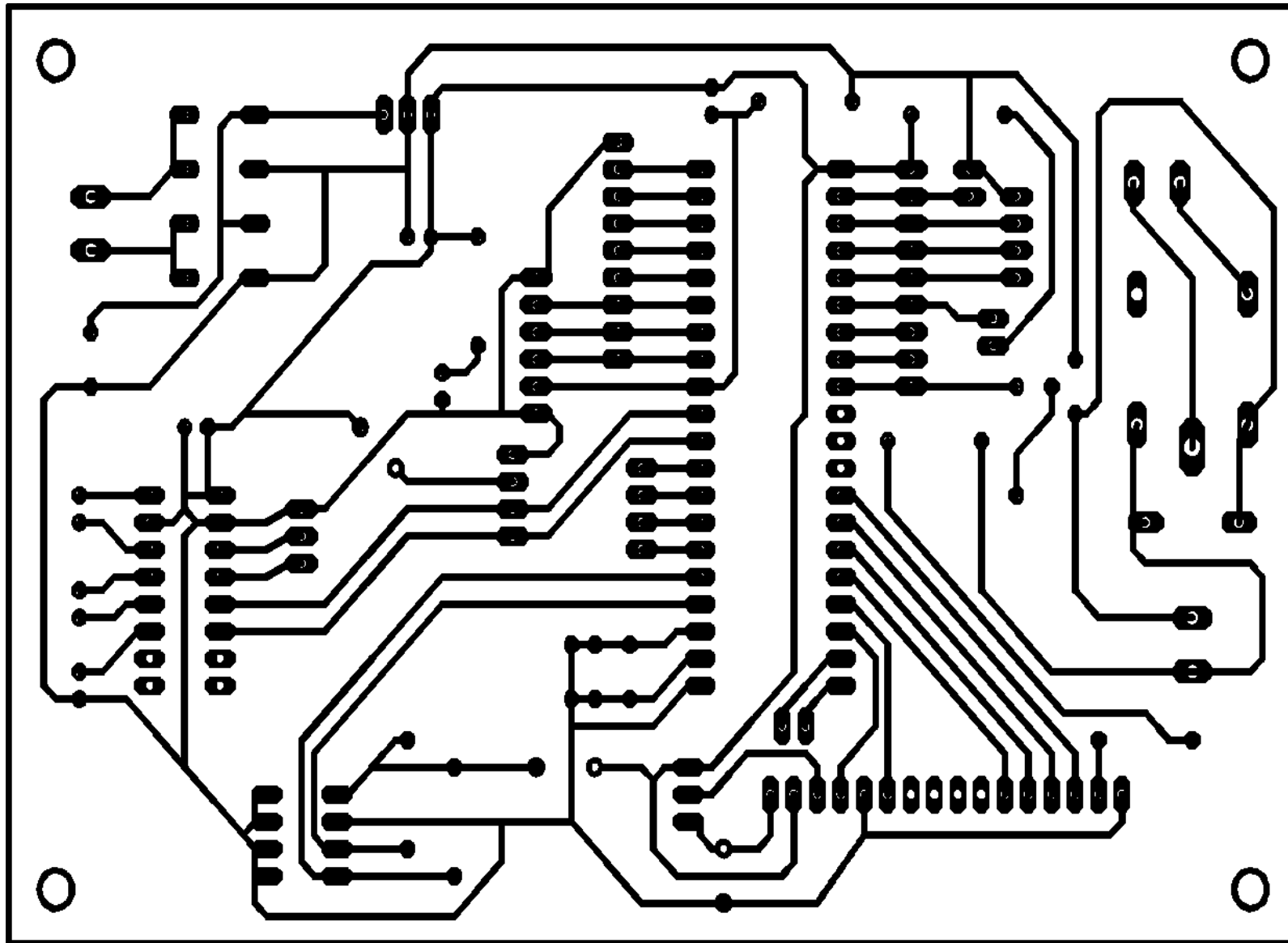◦ The power module consists of IC7805 for 5V supply.

BLOCK DIAGRAM

TEXT SMS ON MOBILE

Text sms
_____

Coordinates of Vehicle :-

Longitude = 18 38.6878 N

Latitude = 73 45.3423 E

_____

CIRCUIT DIAGRAM

PCB LAYOUT

SOFTWARE USED IN OUR PROJECT

◦ **EAGLE Software:** It is used for PCB design, it includes Schematic Capture, Board Layout and Autorouter.

EAGLE has following 2 sections:

1) Schematic capture: For designing circuit diagrams. Parts can be placed on many sheets and connected together through ports.

2) PCB layout: It allows auto-routing to automatically connect traces based on the connections defined in the schematic.

◦ **KEIL software:** It used for Microcontroller Programming Software. It has compiler designed specifically for the 8051 microcontroller. It converts a High Level Language source code (written in assembly language or C language) into its object code. Then a linker is used to create an absolute object module suitable for your circuit.

COMPONENT LIST

• AT89s51 • MAX232 • 7805 • 7812 • BC547 • TRANSFORMER • CAPACITOR • DIODES(1N4007) • RESISTORS	• LCD Display • CRYSTAL • LED • RELAY • POT • LCD CONNECTOR • IC SOCKETS • CONNECTORS • GSM Modem • GPS modem • Metal plates

APPLICATIONS

Applications and Advantages:

1) This project can be used to track the school bus.
2) This project can be used for cab or car of companies.
3) This can be used to track our car or any other vehicle
4) This project can also be used to track the ambulance of the hospital

Thank you