HACETTEPE UNIVERSITY DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ELE 401-402 GRADUATION PROJECT

GPS/GSM Tracker System For Battery Operated Vehicles

Hüseyin YELKEN
21693593
Supervisor : Prof.Dr.Uğur BAYSAL

INTRODUCTION

A vehicle tracking system is an electronic device installed on a vehicle to enable the owner to track the vehicle's location. It uses GPS and GSM technology which would be the cheapest source of vehicle tracking.

PROJECT DESCRIPTION

It consists of a GSM module, GPS module, GSM and GPS Antenna and a microcontroller.

Basically, GSM module is using for communication between device and users. GPS module, decode the information that is sent by the satellites. This device is portable. It has a rechargeable battery with it. Users can see some information on its screen such as whether the SIM card has been inserted successfully or not. It was packed securely to prevent some unknown damages. You can see final design at figure 1 and device explanations at figure 2.

FIGURE 1

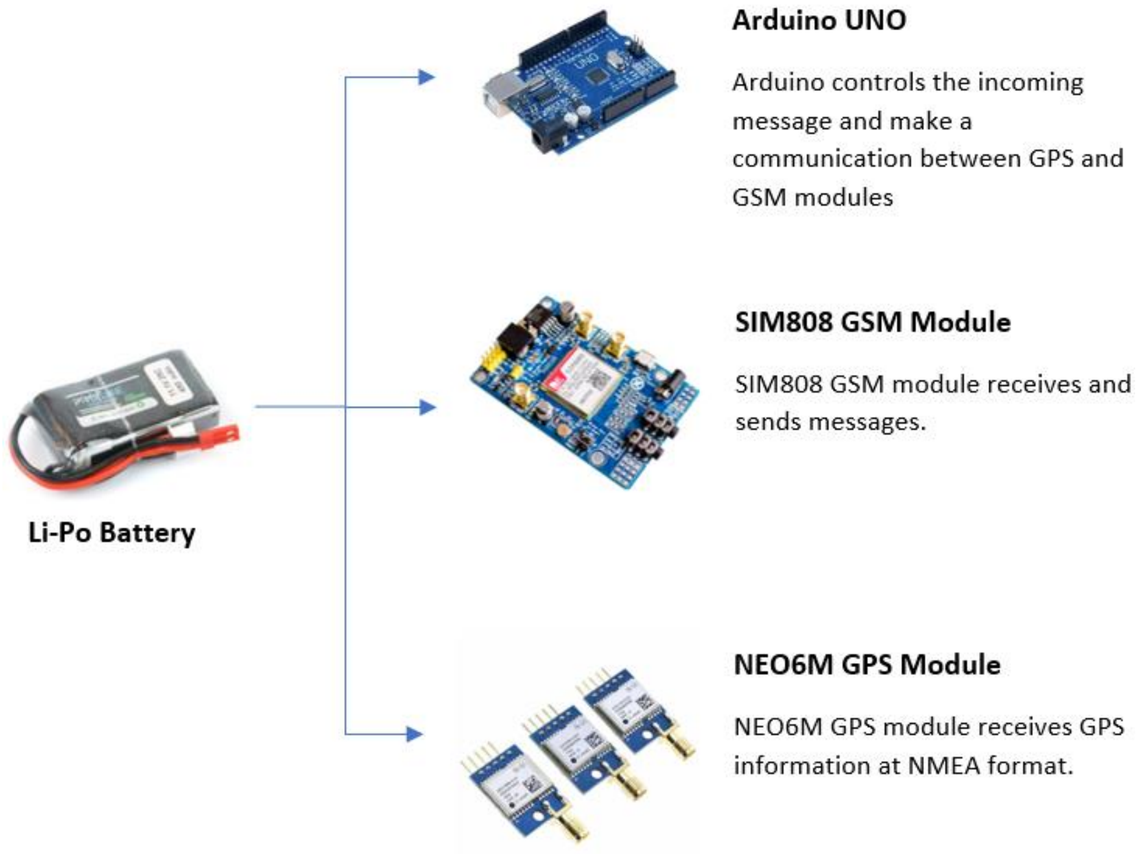

FIGURE 2

WORKING PRINCIBLE

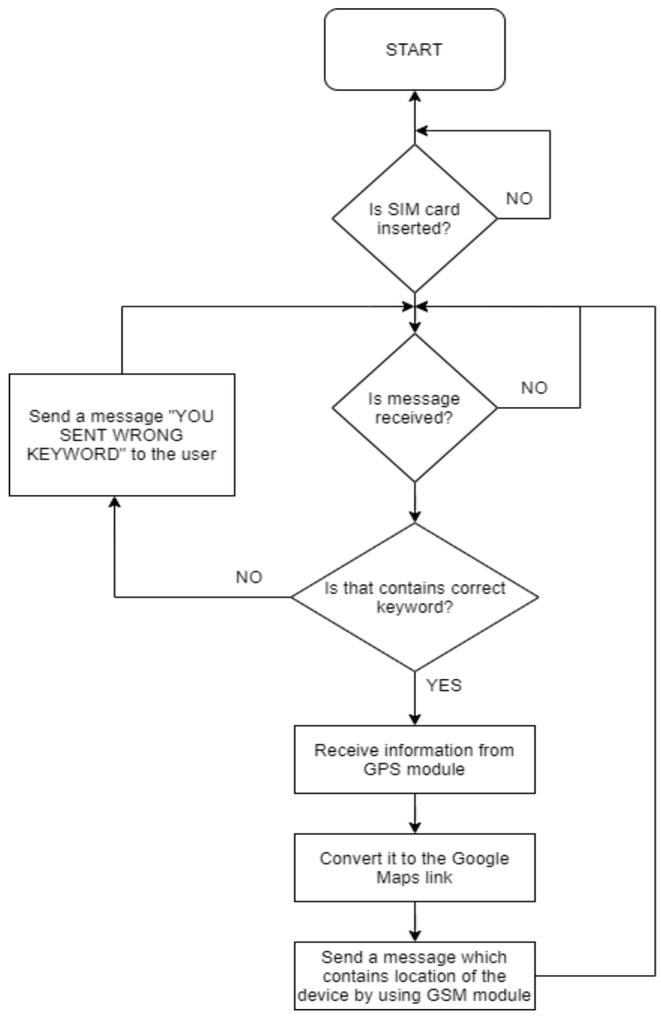

FIGURE 3 - FLOWCHART

When user wants to learn the position of the device, he/she can learn by sending SMS which is including the correct keyword.

When correct message received, GPS module detect the location and microcontroller transmits the location to the GSM module. After that, the message containing the location sent to the user.

When user sends a wrong message, the system is not sending the location.

RESULTS AND CONCLUSION

Here you can see the result of one of our tests. Information was taken from the system ten times and average tolerance values of these ten attempts calculated. The Result was 2.82 meters which is good when compared to the GPS of mobile phones.

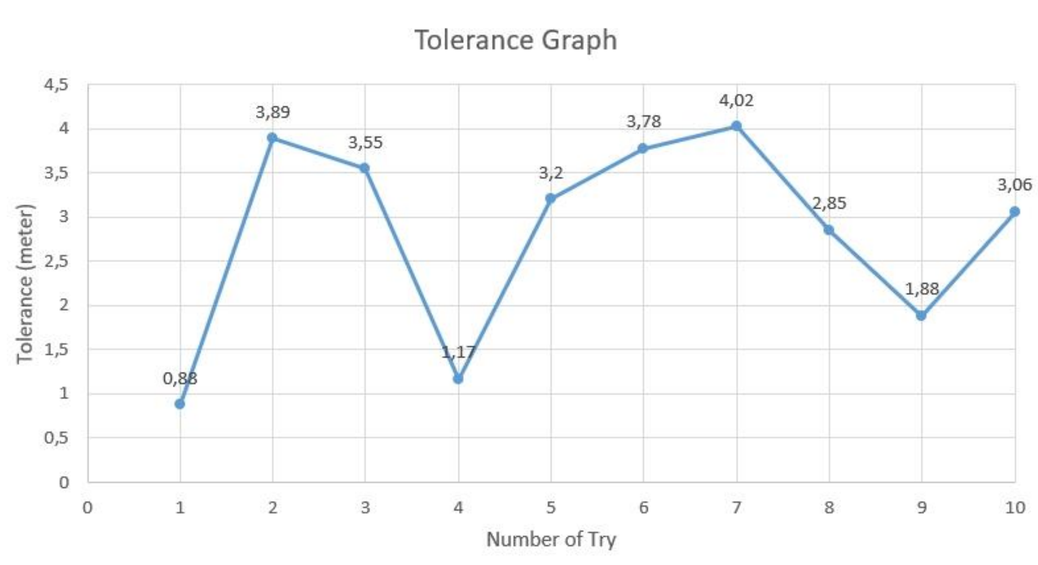

FIGURE 5

I thank my advisor Prof. Dr. Uğur BAYSAL for his help and valuable thoughts. I also appreciate to my dear friend Ali USTA for his help.