

# Soldier Health And Position Tracking System Using GPS and GSM Modem

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**Abstract:** In today's era enemy war-field is an important factor in any nation's security. One of the important role is played by army soldiers. Hence for the security purpose we need tool to track the soldier performance and health. The security of any nation depends on military, army(ground),air force(air) and navy(sea) of country and backbone of all these forces are our soldiers. One of the fundamental challenge in military operations lies that the soldiers are not able to communicate with control room station. In these project the exact location and health status and parameter of soldiers can be send to the base station in real time, so the purpose action can be taken in the case of crises. Hats why we are introducing these paper which is beneficial which provide the information regarding the health status and live location of the soldiers who are fighting for the country on the battlefield.

**Keywords:** GPS, GSM,Security, Tracking.

## INTRODUCTION

The soldiers life is very important for us because they are our savior who protects us from enemy attacks and terrorist attack. The nation security is monitor and kept by army, navy and airforce. There are many concerns regarding safety of the soldiers. So for they are safety we have build a wireless communication system for military application with live location tracking. One of the challenging factor in military operation lies that the soldiers are not able to connect the base station because the soldiers entering the enemy line often lose their life due to lack of connectivity, so it is very important for the control room unit to know the health parameters and active location of our fighters. In these project soldiers tracking is done using equipment's like GSM(Global System And Mobile Communication) and GPS(Global Positioning System) which provide the wireless communications. For detecting the health status of soldiers we are using biomedical sensors such as heartbeat sensor and temperature sensor. These sensor are embedded in such way that it does not affect the mobility of soldiers. The data collected at the base station is used for further prediction and also helps in decision making.

## LITERATURE SURVEY

1. We can describe an outgoing had presented a methodology on body sensor network. In the paper, we describe an on going effort to develop a system consisting of interconnected BSNs for real time health monitoring of soldiers. Body sensor network consisting of such physiological and biomedical sensor placed on human can be used for real time health monitoring[2].
2. We can describe an outgoing introduced a methodology on Accurate and reliable soldier and first responder indoor positioning Multisensor system and cooperative localization In this paper, it is proposed that inertial navigation with foot-mounted sensor is suitable as the core system in GPS denied environments, since it can yield meter-level accuracies for few minutes[3].
3. We can describe an outgoing proposed a methodology on modelling of multipath environment using copulas for particle filtering based GPS navigation. Another class of approaches deals with multipath effects directly at the level of the navigation algorithm which estimates the position from the satellite ranging measurements[4]
4. We can describe an outgoing had discussed methodology on Health Monitoring and Tracking of soldier using GPS. This system can be used in critical conditions. The most significance in this is implementation of M-Health. By implementing this System We can improve the security of our country this is also help to improve the safety of the soldier. This system also helps to provide real time information[5]

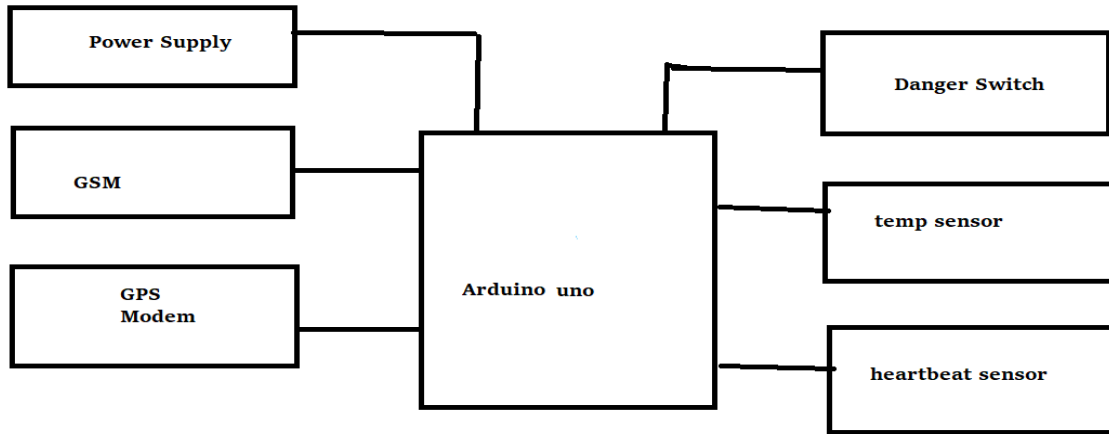
**METHODOLOGY**

Fig 1 .Block diagram

It allows the military to track the current GPS position of soldier and also checks the health status including body. Temperature and heartbeats of soldier. The system also consists extra feature with the help of the soldier can ask for help manually or send a distress signal to military if he is in need. The GPS modem sends the latitude and longitude position with System is vary helpful for getting health status information of soldier and providing the instant help. In this project, we have made The soldier Health monitor using GPS and GSM Based Tracking System based on Arduino.the soldier tracking system will continuously monitor solder heart beats as well as its body temperature whenever any abnormal condition happens then system will send you location two solders on the nearest base station along with the Google map coordinate with health parameters you can request the location at any time and view the location on Google map.

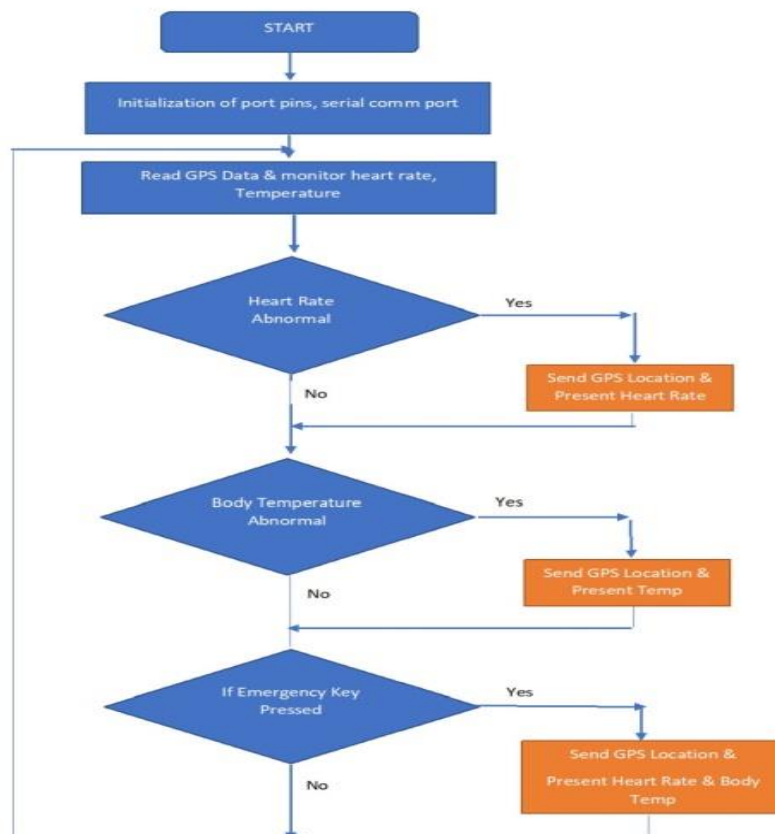
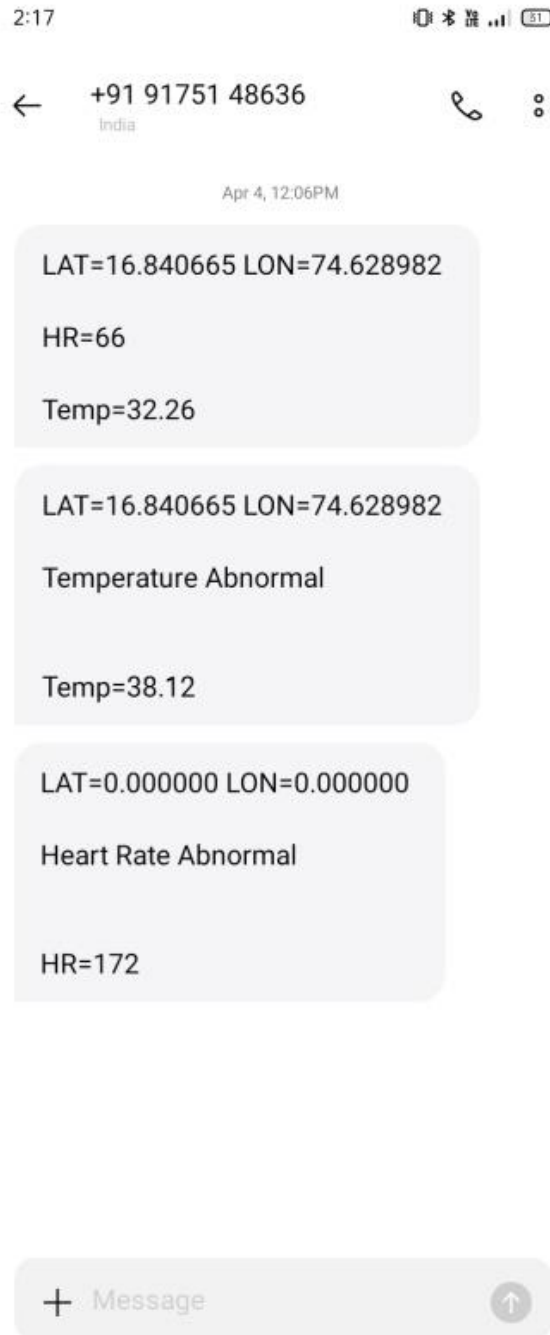


Fig 2 .System flow diagram

**RESULT AND CONCLUSION**

In these project, we have come with idea of tracking location as well as health status of soldier entering the enemy line. This system is efficient and very fast.

The notification is send on the registered number conforming about GSM and GPS configuration

**FUTURE SCOPE**

- 1] Full body monitoring of soldiers is possible ,we can implement more biomedical sensor such as respiration sensor,blood pressure sensor,blood flow sensor etc.
- 2] Bomb detection,in future bomb detection module which will help to detect explosive substance present in surrounding of soldier.
- 3] No need to go on field

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