

Soldier Tracking and Health Monitoring System

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ABSTRACT

In this day and age, fighting is a significant figure any country's security. One of the significant and indispensable jobs is played by the military fighters. There are many worries with respect to the security of troopers. So for their security reason, many instruments are mounted on them to see their wellbeing status as well as their continuous area. Bio-sensor frameworks involve different sorts of little physiological sensors, transmission modules and handling capacities, and can along these lines work with minimal expense wearable unpretentious answers for wellbeing observing. This task provides a capacity to follow the area and screen soundness of the troopers continuously who become derailed and get presence in the war zone. It assists with limiting the time, search and salvage activity endeavours of armed force control unit. This framework empowers to armed force control unit to follow the area and screen soundness of troopers utilizing GPS module and remote body region sensor organizations (WBASNs), for example, temperature sensor, heart beat sensor, and so on. The information coming from sensors and GPS recipient will be communicated to the base station.

Keywords-- Biomedical Sensor, GSM, GPS, Tracking, Low Cost

I. INTRODUCTION

Indian warriors are primarily known for their boldness, notwithstanding scant ammo and security measures, they have many victories to their credits. Warrior's following is finished utilizing GPS and GSM is utilized to give remote correspondence framework. For checking the wellbeing boundaries of warrior we are utilizing bio clinical sensors, for example, temperature sensor and heart beat sensor. Scopes of physiological sensors show the heartbeat, internal heat level. These gadgets will further develop mindfulness for guarantee military staff as well as who will trade data utilizing remote organizations alongside have. Speaking with the base (control room) station become the major difficulties in military tasks likewise the appropriate route between

warrior's associations assumes significant part for cautious preparation and co-appointment.

So this task center around following the area of fighter from GPS, which is valuable for control room station to know the specific area of trooper and in like manner they will direct them. Likewise High velocity, short-range, fighter to-warrior remote interchanges to transfer data on situational mindfulness, like Bio-clinical sensors, GPS route, Remote correspondence.

II. EXISTING SYSTEMS

- A. Had proposed (1) about Observing of patient's wellbeing remotely is significant particularly for patients experiencing medical problem. important bodily functions, for example, beat rate, internal heat level and so on, should be observed routinely as the will be the essential marks of human's wellbeing. In this way, get a GSM based wellbeing observing framework for patient's which gives security to patient's wellbeing. wellbeing observing is an innovation to empower checking patient's wellbeing outside clinical settings. The framework estimates the heartbeat and internal heat level of patient and afterward the quick data will be shipped off the enlisted number.
- B. The system had proposed (2) the following of trooper and route between fighter to trooper, for example, knowing their speed, distance, level as well as wellbeing status of them during the conflict, which empowers the military faculty to design the conflict techniques. Base station gets area of trooper from GPS. The base station can get to the ongoing status of the trooper which is shown on the telephone with the assistance of gsm and thus suitable moves can be made.
- C. Planned work had proposed (3) the framework will follow, screen patients and work with dealing with their wellbeing; so effective clinical benefits could be given at suitable time. By utilizing explicit sensors, the information will be caught and contrasted and a

configurable limit by means of microcontroller which is characterized by a particular specialist who follows the patient; regardless of crisis a short message administration (SMS) will be shipped off the Specialist's versatile number alongside the deliberate qualities through GSM module. Besides, the GPS gives the position data of the observed individual who is under reconnaissance constantly.

- D. The goals of this system (4) is to give a compelling framework model, that will track, follow, and screen patient fundamental readings to offer effective clinical types of assistance in time. By utilizing sensors, the information will be caught and contrasted and a predefined limit. The review centres around heartbeat rate, and internal heat level, in this manner in the event of crisis a SMS will be shipped off the Specialists portable containing estimated values and position. Besides, the paper exhibits the chance of building a total start to finish shrewd medical care checking framework by involving extensive variety of accessible sensors for more imperative human wellbeing boundaries to associate patient with specialists in instances of crisis.
- E. The main reason of this system [5] to plan of wildlife animal global positioning framework utilizing GPS and GSM. This clarifies the philosophy for defeat the issue of creature

injury and mortality due to wandering of wild creatures out of public parks and natural life asylums by the utilization of untamed life global positioning framework. Programmed global positioning framework has been carried out by consolidating GSM and GPS innovation as a gadget that would be connected to the body of a creature and would be constantly checking the place of the creature regarding the GPS characterized limits arrangement inside a natural life safe-haven or public park.

III. BLOCK DIAGRAM

The proposed framework block diagram displayed in figure. The fighter Wellbeing and position global positioning framework permits military to follow the ongoing GPS position of trooper and furthermore checks the wellbeing status including internal heat level and heartbeat of warrior. The framework likewise comprises additional element with the assistance of that fighter can request help physically or convey a pain message to military assuming that he is need help. the GPS modem sends the scope position with interface design with the assistance of that military can follow the ongoing place of the trooper. The framework is extremely useful for getting wellbeing status data of warrior and giving them moment help.

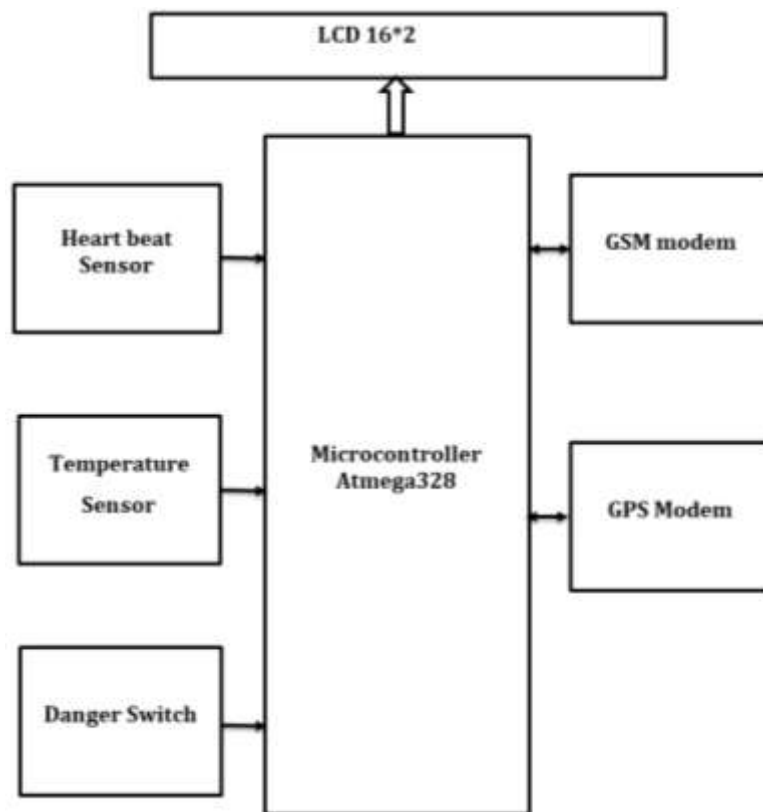


Figure 1: Block Diagram of system

A. Temperature Sensor

The LM35 creates a higher result voltage than thermocouples and may not need that the result voltage be intensified. Type T (copper constantan) thermocouples are appropriate for estimations in the reach 200 to 350 degree Celsius. The LM35 gadget enjoys an upper hand over direct temperature sensor aligned in Kelvin.

B. GPS Module

The Global Positioning system (GPS) is a space-based worldwide route satellite framework that gives solid area and time data in all climate and consistently and anyplace on or close to the Earth when and where there is an unhampered view to at least four GPS satellites.

C. GSM Module

The GSM Module is utilized to give the data of the trooper like the heartbeat rate and internal heat level to a far off area the GSM Module is like a versatile which requires a SIM card for its activity however the upside of GSM module over portable is that it has a sequential network that can be straightforwardly

associated with the microcontroller for sending the AT order for sending SMS.

D. Microcontroller

A microcontroller is a little PC on a solitary incorporated circuit containing a processor center, memory and programmable information/yield peripherals. Microcontrollers work as per the program composed inside its program memory. The significant utilization of these single chip PCs are in programmed answering gadgets.

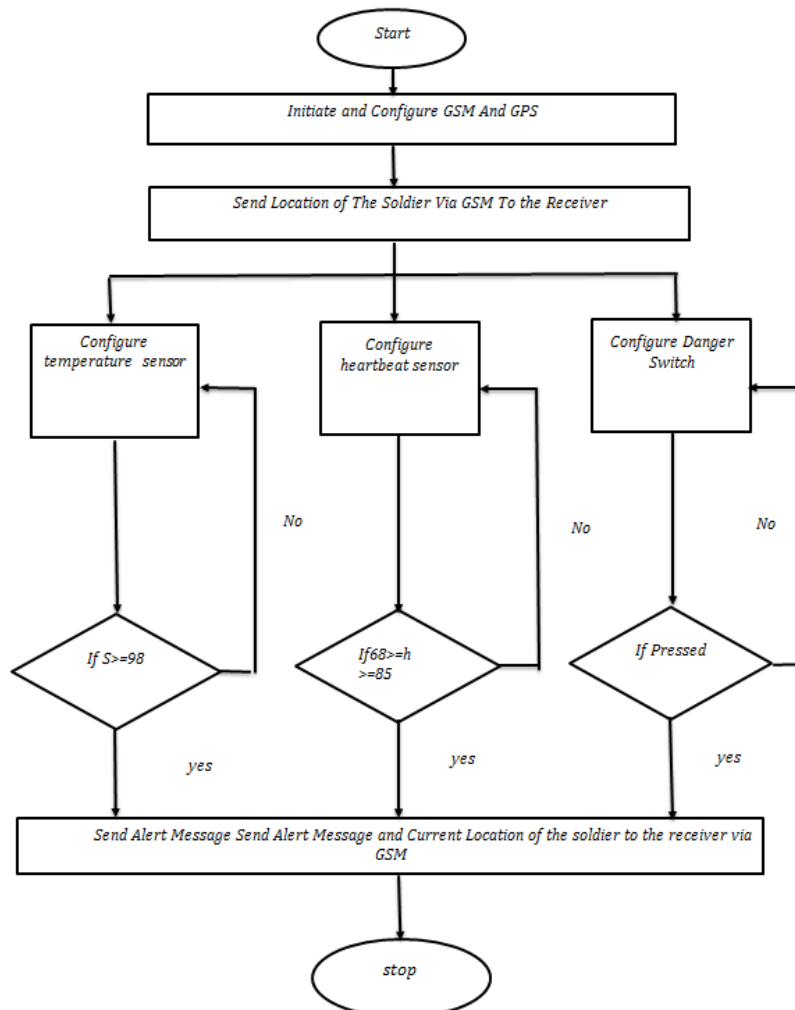
E. Pulse Sensor

The sensor basically consolidates a straightforward optical pulse sensor with intensification and clamour wiping out hardware making it quick and simple to get solid heartbeat readings. To utilize it basically cut the beat sensor to ear cartilage or fingertip.

F. Danger Switch

A Risk Fundamental Switch Sign is a valuable instrument to assist with safeguarding the wellbeing and security of personnel.it makes a motion to the base station from fighter on the off chance that he is peril circumstance by wellbeing or by hazardous from foe.

IV. FLOWCHART



Flowchart of the system as shown in figure. First we have to start system and initiate and configure GSM and GPS system. GPS system, bio medical sensor are mounted on body of soldier. Send the location of soldier via GSM system to receiver at the army base station information received is checked out if body temperature of is greater than or equal to 98, heart beat count is in between 68 to 85 then alert message is send to receiver via GSM . If Danger switch is pressed during insured situation for help then message is send to the base station if not pressed then loop will continue.

V. CONCLUSION

Following conclusion can be retrieved from above implementation are:

- GPS tracks position of warrior anyplace on globe and furthermore wellbeing framework screens trooper's crucial wellbeing boundaries and ecological circumstance which give security and security to warriors.
- Utilization of PIC processor and low power requiring peripherals decrease in general power use of framework. Modules utilized are more modest in size and furthermore lightweight so they can be hefted around.
- So in this manner idea of following and route framework is exceptionally helpful for fighters when they are on military field during war. And furthermore for base station so they can get ongoing perspective on soldier.

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