

A REVIEW ON SOLDIER MONITORING SYSTEM

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ABSTRACT

In today's world a nation power is recognized by its economy, military power and political relations with other countries especially with neighbor countries. But in the present time having strong military power is also vital because no one can predict when our ally becomes our enemy. For having strong military a nation need advanced technology for its soldiers like advance weapons, advance gadgets and many more. This project will be very useful for our soldiers in many conditions like Surgical Strike. Each soldier will have a GPS and GSM module and heart beat and temperature sensor which will tell the base headquarter about their position, pulse rate and temperature of the body.

KEYWORDS: *GSM module, GPS module, Heart beat sensor, Temperature sensor.*

I. INTRODUCTION

In the present time our soldiers always face a deathly combat everyday no matter a war is on or off, in our country various terror groups whether local or foreign are active in our country which is a big threat to the country. Our project is basically focusing on helping our soldiers by measuring their pulse rate such that it's low or high, by measuring their body temperature, by tracking their position so that if a soldier needs help then the base can help them in the best possible way. Their pulse rate, temperature of the body and their position can be check with the help of GSM module which will send the signals of this information to the base. The following paper is further divided into the literature review and conclusion. Section III will describe about the previous work done on Soldiers health and position tracking system and section IV is about the conclusion.

II. LITERATURE REVIEW

Dineshkumar Jaiswar , Sanjna S. Repal [1]: Sometimes during search operations soldiers get injured like by hidden mines, hidden enemies, also sometimes they become lost. So to it is very important to keep our soldiers health and their position in check, after all our every soldier life is very important as they put their own life at stake for the sake of our country, its people. GPS, GSM, Heart beat sensor and Temperature can be use together in this project for tracking the position of the soldier and also can do monitor the health status of the soldier body.

Govindaraj A., Dr. S. Sindhuja Banu[2]: In this paper they had focused on tracking the position of the soldier and measuring the various health parameters using different biomedical sensors. The main aim of using GPS is to track the position of the soldier so that the personnel at the base could guide them at the war field and side by side could check the body temperature of the soldier. Web cam (video camera) is also used. Keypad is used for giving any type of input if needed.

M.V.N.R. Pavan Kumar, Ghadge Rasika Vijay ,Patil Vidya Adhikrao, Bobade Sonali Vijaykumar[3]: They found their idea from the mountaineers as mountaineers uses wrist watch for tracking their position, to know the temperature of their surroundings, to know the direction.

R. Archana, S. Indira[4]: In their paper they had given stress on the protection of soldier itself especially of those who go on special tasks or missions because if a soldier is safe then our nation is safe. For this GPS for tracking their position and different biomedical sensors are used for checking their health in a definite interval of time and also to monitor their movement. They focused on using light weight sensors and a power source which give more than sufficient power to these components.

Shweta Shelar, Nikhil Patil, Manish Jain, Sayali Chaudhari, Smita Hande[5]:

In this paper they have focused on helping the soldiers by providing medical assistance at the battlefield. They have considered the soldier's health in terms of heart beat and body temperature of the sensor. For providing this type of facility GPS is used for tracking the soldiers.

In case if soldier is injured then by using the GSM modem attached to the device an SMS will be sent to hospitals in the vicinity or to the base station to provide help.^[5]

Mr. Palve Pramod[6]: In his paper he focused on integrating the bulky components into lightweight package which could acquire more power without using large power source. GPS is used to guide the soldiers in the war field when they get lost and also to guide them to find the safe place whenever needed. Because many soldiers lost their lives when they entered in the enemy region without even knowing so this will help to guide them towards the right path. Temperature sensor and heart beat sensor will help to check their health status. Fundamentally it is meant for establishing communication between the soldier and the base.

S.Nikam, S.Patil, P.Powar and V.S.Bendre[7]: In this paper they mentioned that infantry soldiers face the most fundamental problems like establishing communication with the base station and tracking their position whether they are on the correct path or not, due to this many soldiers either get lost their lives or get stuck in the enemies trap. With the help of this gadget soldiers will be able to make communication with base station, also will be able to find the right path by the guidance that would be provided by the team at the base. This help in reducing the losses of lives of our soldiers. The military personnel will exchange the information through wireless communication and with the help of biomedical sensors, GPS and GSM all this will be possible.

Pangavhane S. M., Choudhary Sohanlal and Pathak Bhavik [8]: This paper has illuminate the present condition of our soldiers as it is very hard to communicate with soldiers with the help of radio line especially in the war where very many soldiers lost their path and further lost their lives. So in this project they have mentioned a device which is compose of GSM, GPS, heartbeat sensor and temperature sensor. The device will be attach with the soldier pocket and the temperature and heartbeat sensor will give continuously the body temperature and the pulse rate to the base station with the help of GSM. The position will track down by GSM.

III. CONCLUSION

In this tough world, double face and the increasing terrorist activities, we now need advanced weapons which is possible only when we have advance technology. This project is the step among those steps which have been taken to empower our military force to fight against the terrorism and to protect our country from external and internal threats.

From the above we can conclude that this proposed project is an effective security and safety system which is made by integrating the advancements in wireless and embedded technology. Making an effort in ensuring the safety of the soldiers, using this system we can reduce casualties of war. We hope this strengthen the defense systems by providing the critical information about soldier and the battle field environment to the base control camp so that they may take required action and proceed for a successful mission .

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