Real Time Implementation of Hybrid Personal Tracking System for Anomaly Detection.

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Abstract: *In this paper real time implementation of hybrid personal tracking system for anomaly detection is proposed. now a days Demand of personal tracking system is increases. Using the advancement in the current technology, it becomes a favourable solution to meet the above requirement. In this research, an attempt is made to GPS technologies to detect and track the position of the Mankind specially women's , Childs and those person they are in trouble. Initially, the position of the target is tracked by the authorized caretaker using GPS technology. The proposed hybrid tracking system is implemented in real-time using a customized embedded device.*
Keywords: *GPS, Heart beat rate sensor, Wi-Fi Router/Hotspot, Customized embedded device, Tracking and caretaker.*

I.   Introduction

In recent years, the threats to the mankind are found to be increasing, which demands a customized personal tracking system. The various applications identified includes child monitoring and tracking, women safety and save the people are in trouble , if they need help at that time this propose system are beneficial. In this system we use two panic switch it's a main component of the system, The global positioning (GPS) system modem are used to track the position of the target, and use the heart beat rate sensor to sense the pulse rate , GPS is an open digital cellular technology use for transmitting data service. This complete system is based on microcontroller board, it's also cloud. In this system consist of microcontroller development board, GPS module, two panic switches and the heart beat rate sensor. The development board comprises of an UART microcontroller, which performs the operation of extraction of location data from GPS receiver. In this system if any mankind are in trouble the press the panic switch then all data send to the microcontroller and at that time GPS finding the position through GPS satellite and we use the Wi-Fi Router\Hotspot for the internet. The cloud send the real time location to the Google map and the Facebook and it's also send the notification on Telegram, Gmail and Twitter at that time our smart phone get vibrated.

II.   Literature Survey

In this paper [1] the following features of the solution were illustrated. The children location monitoring system was developed by this author using GPS and GSM technology. Here GPS has been position finding and the GSM is used for the communication system. To provide the visual data transfer about the position detected Google map is used in this work. The developed work mainly caters to the children monitoring in school area. By using GPS module developed the children tracking system is also extended to the parent with the help of android smart phones with internet connectivity and now position detected on the by link app ,and get the notification on IFTTT and the Gmail.

In this paper[2] mainly focus on the microcontroller based system the location tracking system based on the women and children security using GPS and GSM was developed by this author. The GPS system has been used to real time location and the GSM module helps us on to transmitting the positional data to the smart phone. The final goal of this developed system is to monitor the children's and the women's, and to provide the safety and security to them. Therefore the microcontroller containing The GPSwherein the individual can trigger the system to send the positional coordinates in the form of Google maps link to the Smart phon.

In this paper [3] the heart beat rate of the driver is detected using R- peak detection algorithm. The monitored or detected heartbeat rate is compare with normal value that is 60-100 beats/ minute to decide whether the driver is safe in hands to drive. But now in developed system use pulse rate sensor by using that

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detect the pulse rate and suppose the pulse rate is greater than normal rate at that time we got the location of that person on by link app.

In this paper [4] a real-time tracking system to keep finding of the injured or wounded person in heavy blowhas been developed.This system was developed usingindustrial strength GPS device and a GSM modem. This system is design to finding the position of human being given to the heavy blow zone. It consists of a mobile tracking unit and a tracking center, where the positional data is monitored. The mobile tracking unit send the co-ordinates using Wi-Fi Router\ Hotspots the tracking center. The received co-ordinates are then stored in server, which contains the Google maps and some social Medias allowing the smart phones to real time location of the injured or wounded person.

In this paper [5]detailed about Increasing need for children's in present times as there could be situation of the child getting lost in the overpopulated area. This paper focus on main feature ofthat lost child can be helped by the people around the child and can play a considerable character in the child's safety until rejoin with the parents, the most of the costume available on this day are concentrated on to providing the current location of child to the parents.

From the above literature, it is observed that the GPS system is used for finding the position of the human being, and Wi-Fi Router/hotspot through internet is used tacking the positional information to the caretaker. Also, internet service has been used by the caretaker for the synchronous monitoring of the human beings.

III. Proposed Work

In this paper utilize the GPS (Global Positioning system) module, micro-controller, Battery, Two emergency switches, Wi-Fi router and pulse rate sensor. Battery are utilize for the power supply its give the 5V supply. Emergency switch or the panic switch are the key parameter of this system. The GPS module is the transceiver device it is capable to receiving information from GPS satellite and then it calculate geographical position and passed the data through microcontroller .Microcontroller store the data and it receive the input and it also receive the signal from the panic switches 1 and 2. The microcontroller for the stores information for different parameter which should be observed. The Wi-Fi router \ Hotspot are utilize for the internet. Microcontroller store the information gathered by the GPS and this data pass to the UBIDOTS cloud. We store the information on cloud and the cloud send the data form of SMS on SMS service provider , send the notification on Gmail , Telegram , twitter and facebook.

IFTTT is a free way to get all application that is twitter, facebook etc. and see the real time location on Google map in the smart phone or laptop at that time our smart phone will get vibrated. The main precept of this system is now a days mankind are not safe, when the children are in school campus and the school bus and anything wrong happens with them they need help at that time if they press the emergency switch with the help of GPS modem got real time location of the child's on their parents smart phone and get notification on the Gmail, telegram, twitter etc.. Another motive of this system is for women's if they feel uneasy ,and harassment happens with them at that time if the press the emergency switch and GPS send the location to the relatives and the police station. And one more motive of this system is the pulse rate sensor utilize in our system. This sensor gathered the pulse rate, if the pulse rate is larger than the mark so the chances of heart attack is increases so to save this people from heart attack we make this system. If the rate is so high at that time send location on the ambulance and the relatives for those needs we make this system.
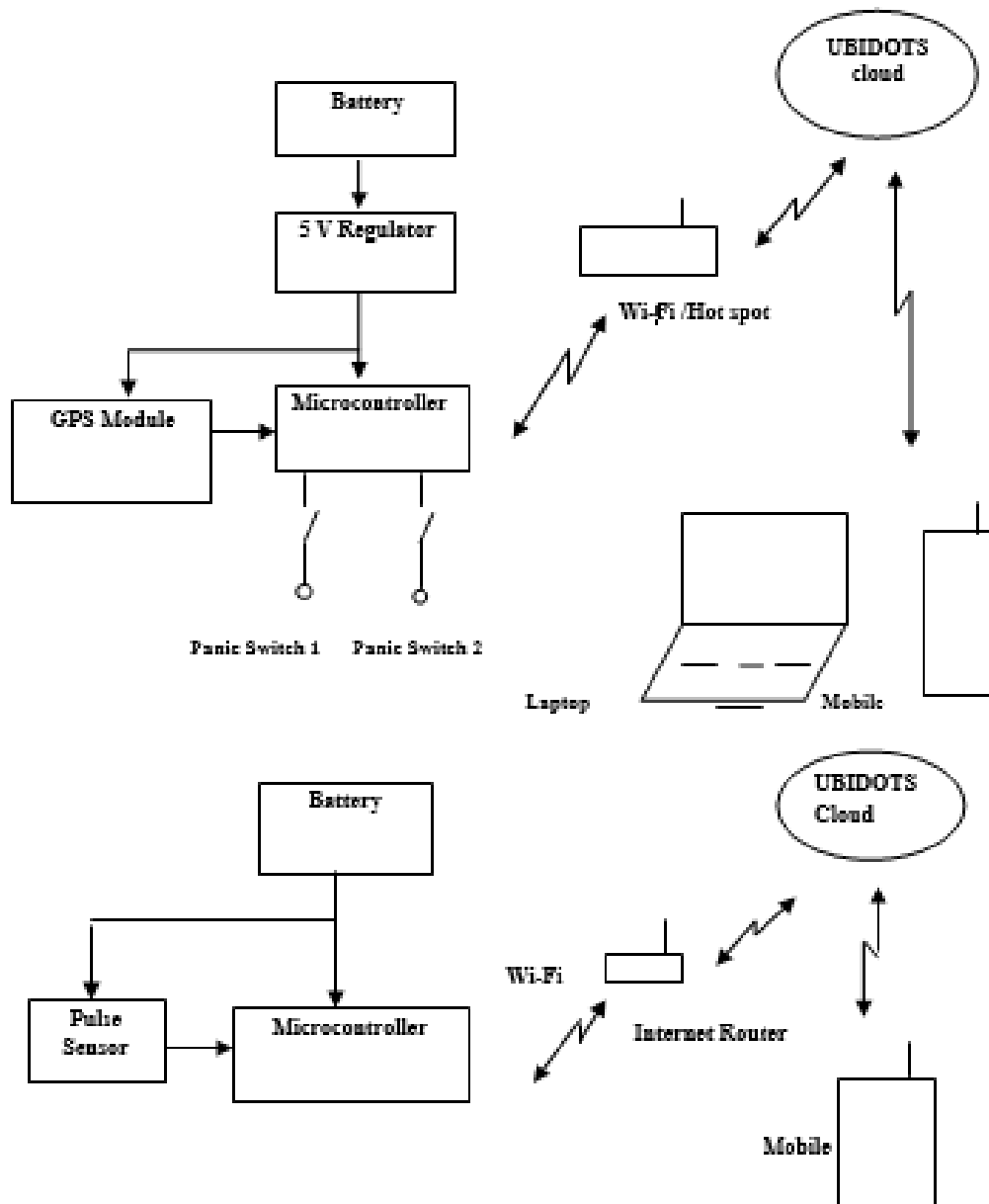
Fig. Block diagram of system

IV. Conclusion

As per the Literature Survey done it is seen that the location needs to be monitored. In this research the hybrid personal tracking system is to track the human. This safety wearable device is capable of acting as a smart IOT is provides parents and the close friends and relative with the real time location. It consist of GPS model play important role in tracking a mankind. In this system find the location of those children's and the women's and the person they are in trouble. After finding the real time location of those victims we helps to solve their problems during difficulties with the help of this system we will reduces the problems happens with the children's and reduces the harassment happens with the women's, and save the people from the health problem .

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