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IOT FOR WOMEN SAFETY

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ABSTRACT: *Today in the current global scenario, the prime question in every girl's mind, considering the ever-rising increase of issues on women harassment in recent past is mostly about her safety and security. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security. This paper suggests a new perspective to use technology for women safety. "848 Indian Women Are Harassed, Raped, Killed Every Day!!" That's a way beyond HUGE number! We propose an idea which changes the way everyone thinks about women safety. A day when media broadcasts more of women's achievements rather than harassment, it's a feat achieved! Since we (humans) can't respond aptly in critical situations, the need for a device which automatically senses and rescues the victim is the venture of our idea in this paper. We propose to have a device which is the integration of multiple devices, hardware comprises of a wearable "Smart band" which continuously communicates with Smart phone that has access to the internet. The application is programmed and loaded with all the required data which includes Human behavior and reactions to different situations like anger, fear, and anxiety. This generates a signal which is transmitted to the smart phone. The software or application has access to GPS and Messaging services which is pre-programmed in such a way that whenever it receives emergency signal, it can send help request along with the location coordinates to the nearest Police station, relatives. This action enables help instantaneously from the Police as well as Public in the near radius who can reach the victim with great accuracy.*

Keywords: IOT, VARIABLE, SMART PHONE, HEART SENSOR, GPS

I. INTRODUCTION

- In the present situation of India, women are equally contributing to the nation compared to men, The only problem women face in today's world is safety.
- So, in this paper we are proposing a smart band model especially for women safety.
- So, for safety of Women we will introduce a smart band model which contains various sensors which will measure different parameters continuously
- Nowadays internet of things (IOT) is new and very fast developing concept
- It is very much useful for police ,through which they can monitor and track different crimes.

II. HARDWARE

Hardware components for Women's Safety Band:

- ★ MICROCONTROLLER
- ★ GPS
- ★ RASPBERRY PI
- ★ GSM

1. **Microcontroller:** Any ARM 7 microcontroller having two UART ports can be used
   - It has 16-bit RISC MICROCONTROLLER
   - IT HAS TWO 10-BIT ADC WITH 14 CHANNEL
   - IT ALSO HAS TWO UART PORT WHICH USED FOR GSM AND GPS SYSTEMS
2. **RASPBERRY PI:** RASPBERRY PI IS SINGLE BOARD COMPUTER
   - IT CUP SPEED RANGE IS BETWEEN 700 MHZ AND 1.2GHZ
   - IT ALSO HAS ONBOARD MEMORY BETWEEN 256MB AND 1GB.RAM
   - THIS IS USED AT RECEIVER TO DISPLAY VALUES AND POSITION IN TERMS OF LATITUDE AND LONGITUDE
3. **GPS:**
   - GPS GIVE A POSITION OF A DEVICE IN TERM OF LATITUDE ,LONGITUDE AND ALTITUDE
   - GPS IS USED TO TRACK MOVING DEVICE USING SATELLITE SIGNAL
   - WHEN GPS IS USED THERE IS COMMUNICATION BETWEEN GPS TRANSCEIVER AND GPS SATELLITE
4. **GSM**
   - GSM IS A CELLULAR TECHNOLOGY WHICH IS USED FOR VOICE AND DATA TRANSMISSION
   - GSM OPERATES IN BAND OF 900 MHZ TO 1.8GHZ
   - THROUGH GSM IT IS POSSIBLE TO TRANSMIT SMS

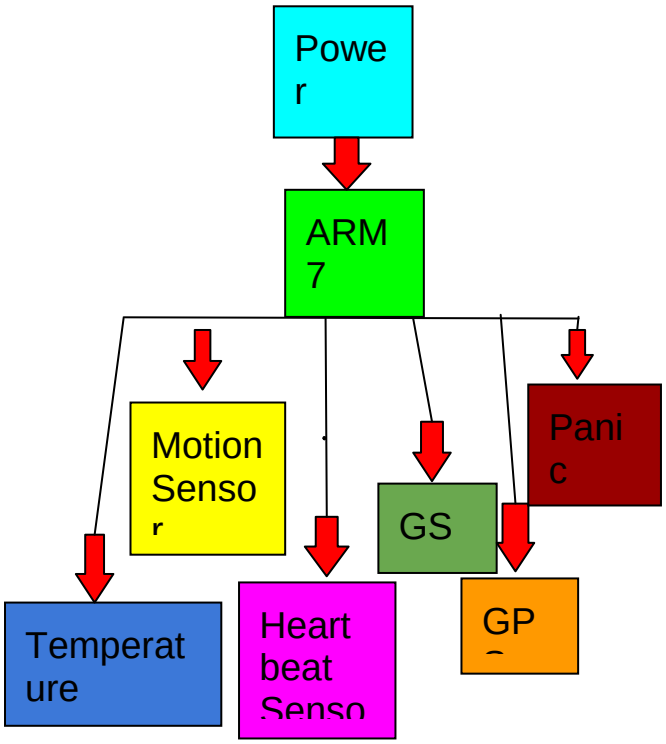

Figure 1 :Block Diagram

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panic button is provided for emergency alert When panic button is pressed gsm will urgently send "help" message without comparing to the threshold values

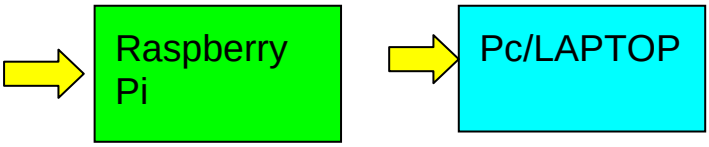

Figure2: RECEIVER BLOCK DIAGRAM

III. WORKING

- ➔ Firstly the device should be charged after that it takes sensors on device for reading
- ➔ This reading is controlling sent to microcontroller
- ➔ Microcontroller will compare this readings with the threshold values given to it.
- ➔ This threshold values can from person to person. After comparing this threshold values Microcontroller will send help message accordingly.
- ➔ Using IOT technology we can continuously monitor changes in sensors values

NOW WILL KNOW ABOUT DIFFERENT TYPES OF DEVICES FOR WOMEN's SAFETY

- ➔ According to the national Sexual Violence Resource center, 91% of U.S is female.
- ➔ Additionally, one in five women is raped during their lifetime.
- ➔ We have huge numbers point for a systemic problem that needs addressing from multiple perspectives
- ➔ A few tech companies are very much interested in finding a way to expand on existing tools for personal safety.

THEY ARE FIVE TYPES

- ★ SAFELET
- ★ SIREN
- ★ STILETTO
- ★ ROAR
- ★ REVOLAR

1. **SAFELET**:IT looks like bracelet and it has two buttons on the two sides
   - ➔ That buttons are used for to send a message to contact with in a guardian network.
   - ➔ If the situation is one of high danger, friends and family members who see the alert can automatically call an emergency.

. **2. SIREN:** It is actually helps users stay safe by emitting a piercing, loud sound to confuse and distract attackers.

- ➔ The sound is over 110 decibels loud and can be heard from 50 feet away.
- ➔ Users simply twist the top of the ring to left approximately 60 degrees to emit the loud sound.
- ➔ Its stylish design and easy access make it simply to use in variety of situations

3. STILETTO: In an effort to make the personal safety device more discreet, it looks like modern jewelry.

- ➔ It will work in a secret mode to help for women's.
- ➔ Using this app users can set up emergency contacts and they can plan a route where they want to reach safely

4. ROAR(ATHENA): It is first product ATHENA, to get help anywhere anytime for women

- ➔ It will be in the same of half dollar coin. When the users press the button it gives the loud sound (ALARM)
- ➔ The device then sends an alert with the location of the user to contacts who can help.
- ➔ The device can be attached to a purse or even worn can be who can help

5. REVOLAR: It is in a very small size. It looks like Oval_ shaped and measuring less than two inches, it can fit easily anywhere

- ➔ An alternate case lets users easily attach it to set of keys
- ➔ when button is pressed twice to sends a yellow alert to designated contacts ;they message contacts; they receive a text message with user location and a message with the user's location and a triple press sends the user location and the message saying the user feels unsafe.

IV. CONCLUSION

In this paper, we have proposed the system for security of Women Safety.

This paper presented a wireless method which will alert and communicate with secure medium.

It will also capture image via camera when any problem occurs. When the sensor kit button is pressed the camera will collect the information of user.

This information will be sent to the registered phone number along with the link.

This will speed monitoring for Women's safety can also be done by GPS tracking Mechanism.

This GPS can help for women's while traveling in bus at night it can locate the traveling routes

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- SHE (society harnessing equipment)-Garment that generates 3800kv, up to 80 electric shocks
- ILA security-3 personal alarms to shock an attacker
- AESHS (Advanced Electronics system for human safety)-tracks Victim location