REVIEW PAPER ON WOMEN SAFETY SYSTEM

Ms.Priyanka Y. Gonde[1], Mr. P.B. Ghewari[2]

[1]P.G Student, Dept. of E&TC, AMGOI, Vathar, Kolhapur, Maharashtra, India
[2]Associate Professor, Dept. of E&TC, AMGOI Vathar, Kolhapur, Maharashtra, India

---***---

Abstract *In latest years, acts of physical attack and violence against women are rising. With growth of female employees in industries and other sectors of the commercial market, it is now becoming a need for females to travel at late hours and visit distant and lonely locations as a part of their work. Defense isn't the only measure that can be enough against this increasing abuse. A security solution that makes a way of safety among women needs to be devised. Thus, there is need of simpler safety solution that can be activated as simply as by pressing a button and can instantly send out alerts to the near ones of the victim. So, this project focuses on a safety system that is designed solely to serve the purpose of providing security and safety to women so that they never feel helpless while facing such social challenges.*

Key Words: Safety system, raspberry pi, Internet.

1. INTRODUCTION

The status of ladies in India has experienced numerous extraordinary changes in the course of the last couple of centuries. In modern India, women continue to face social challenges and are often victims of abuse and violent crimes. According to a worldwide poll conducted by Thomson Reuters, India is the "fourth most dangerous country" within the world for ladies and therefore the worst country for women among the G20 countries. The safety of women is a distress of increasing need in India and other countries. The primary issue in the handling of these cases by the police lies in constraints preventing them from responding quickly to calls of suffering. These constraints contain not knowing the location of the crime, and not knowing the crime is occurring at all: at the victim's end, reaching the police assuredly and discreetly is a challenge.

This task centres on a security framework that is planned solely to effectively provide security and wellbeing to ladies so they never feel defenceless while confronting such social difficulties. The Delhi "Nirbhaya" case that triggered the entire nation was the greatest motivation for this project. It was high time we women needed a change. To aid in the removal of these constraints, in this approach we are going to developed IoT based women safety device. The embedded- IoT platform consists of Raspberry pi as a controller, GSM for sending the message and call, GPS to locate the women, camera for video streaming and mic for recording audio. The user can easily and discreetly trigger panic button provided on the device. If the panic button pressed once, it will send the message containing the geographical location of the user to the pre-selected list of emergency contacts. Also, the camera and Mic starts to stream the video and record the voice respectively.

2. LITERATURE REVIEW

[1] Jijesh J. J, Suraj S, D. R. Bolla, Sridhar N K and Dinesh Prasanna A, "A method for the personal safety in real scenario," 2016 International Conference on Computation System and Information Technology for Sustainable Solutions. (IEEE):

More accidents occur for women, children and elderly people who always feel that they need the support to move around. With the help of advanced technology individuals can make use of a simple gadget which can be used whenever they are in unpredictable circumstances to establish connectivity between police and family The device designed is a portable one which can be activated as per the requirement of the individual which will locate the victim using GPS and with the help of GSM emergency messages can be sent to the respective locations as per the design. The gadget provides an alarm system, call for help, and electric shock to get rid of the attacker.

[2] Prof. Basavaraj Chougula, Archana Naik, Monika Monu, Priya Patil and Priyanka Das, "SMART GIRLS SECURITY SYSTEM", (IJAIEM) 2014 :

This paper suggests a new perspective to use technology to protect women. The system resembles a normal belt which when activated, tracks the location of the victim using GPS (Global Positioning System) and sends emergency messages using GSM (Global System for Mobile communication), to three emergency contacts and the police control room.

[3] Poonam Bhilare, Akshay Mohite, Dhanashri Kamble, Swapnil Makode and Rasika Kahane, "Women Employee Security System using GPS And GSM Based Vehicle Tracking", international journal for research in emerging science and technology, volume-2, issue-1, january-2015

This paper describes a GPS and GSM based vehicle tracking and women employee security system that provides the combination of GPS device and specialized software to track the vehicles location as well as provide alerts and messages with an emergency button trigger. The information of vehicle position provided by the device can be viewed on Google maps.

[4] Dr. Sridhar Mandapati, Sravya Pamidi, Sriharitha Ambati, "A Mobile Based Women Safety Application (I Safe Apps)", IOSR Journal of Computer Engineering (IOSR-JCE): Jan – Feb. 2015.

In proposed system with the push of one button, people can alert selected contacts that the person is in danger and share the location. With this personal safety app, you'll never walk alone. The personal safety application requires the name and number of the person who is to be contacted in times of emergency. Users can add multiple people in the emergency contacts list. These are the people who will receive notifications or SMS in case of an emergency. All it requires is the user's action to trigger an SOS button provided and it shoots messages as fast as the device can manage. This app also provides necessary first-aid measures that should be taken at the time of emergency situations.

[5] Madhura Mahajan, KTV Reddy, Manita Rajput " Design and Implementation of a Rescue System for Safety of Women", Dept. of Electronics & Telecommunication Fr. C. Rodrigues Institute of Technology Vashi, Navi mumbai,India.

In this literature focus is on creating a safety system that brings about a solution that ensures both defense and creation of a seamless pathway to initiating legal procedures, if any; have to be taken by the victim. We intend to create a partial wearable that can provide a complete security solution and become a utility that eases the apprehension among women and their family members. The objective of this literature work is to create a safety system in the form of a portable safety device for women that do the following tasks: 1. Alerts family and police and gives location coordinates of the woman being attacked. 2. Incorporates a defensive mechanism by giving a mild shock.

3. PROPOSED WORK

It is proposed to design and implement smart system for women safety using internet of things (IoT). As shown in the figure 1 below, the device intends to work as follows. If a woman is subjected to attack by an adversary, then a panic button has to be pressed manually, by her. This switch will trigger the controller. Global Positioning System (GPS) will obtain the area co-ordinates of the lady exposed to assault and will send these to the pre-chosen mobile phone numbers (ordinarily the family and the friends) via GSM module. Also with this it is going to capture the image/video and audio of the attacker and transmit it through an RF module to another section where it will be seen.
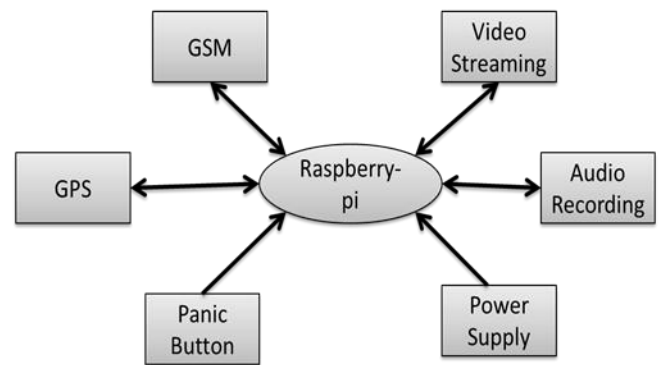

Fig 1 : Block Diagram of Women Safety System

The information of the modules and components to be used in the system is briefly explained below

Raspberry Pi: The raspberry Pi is a controller board based on the Broadcom BCM2837 chip, processor running at 1.2 GHz, 64-bit quad core processor, on-board 802.11n Wi-Fi, Bluetooth and USB boot capabilities.

GSM & GPS: The SIM 800L GSM module is chosen, operated at 3.8v to 4.2v. The GPS module used to send the location co-ordinates with the use of GSM.

Camera: The Raspberry Pi Camera Board plugs directly into the CSI connector on the Raspberry Pi. It's able to convey a crystal clear 5MP resolution image. The board itself is small, weighs just over 3g, making it perfect for mobile or other applications where size and weight are important.

Audio Device: USB microphone is used with Raspberry pi .

Panic Button : A panic button is an electronic switch which will be designed to initialize system and start to assist in alerting somebody in emergency situations.

4. CONCLUSIONS

This research work plays an important role towards providing the fastest way of safety for women. The proposed design will deal with dangerous issues faced by women in the recent past and will help to solve them through using safety devices. This work will focused on developing a smart low-cost device to help women, feel them safer and prevent the occurrence of rape, harassment and other dangerous situations. The project would aid in enhancing the safety and security of all despondent and badgered women and children.

The system helps to maintain gender equality by providing a safe environment to women in the society and allows them to work till late nights. Anyone before doing any crime against the women will be warn and it helps to reduce the crime rate against the women.

REFERENCES

[1] Jijesh J. J, Suraj S, D. R. Bolla, Sridhar N K and Dinesh Prasanna A, "A method for the personal safety in real scenario," 2016 International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), Bangalore, 2016, pp. 440-444.

[2] Prof. Basavaraj Chougula, Archana Naik, Monika Monu, Priya Patil and Priyanka Das, "SMART GIRLS SECURITY SYSTEM", International Journal of Application or Innovation in Engineering & Management (IJAIEM), Volume 3, Issue 4, April 2014, pp. 281-284

[3] Poonam Bhilare, Akshay Mohite, Dhanashri Kamble, Swapnil Makode and Rasika Kahane, "Women Employee Security System using GPS And GSM Based Vehicle Tracking", international journal for research in emerging science and technology, volume-2, issue-1, january-2015.

[4] Dr. Sridhar Mandapati, Sravya Pamidi, Sriharitha Ambati, "A Mobile Based Women Safety Application (I Safe Apps)", IOSR Journal of Computer Engineering (IOSR-JCE): Jan – Feb. 2015.

[5] Madhura Mahajan, KTV Reddy, Manita Rajput "De- sign and Implementation of a Rescue System for Safety of Women", Dept. of Electronics & Telecommunication Fr. C. Rodrigues Institute of Technology Vashi, Navi mumbai, India, 2016 (IEEE).

BIOGRAPHIES

Ms. Priyanka Y. Gonde has completed B.E (Electronics & Telecommunication) from AMGOI, Vathar. She is pursuing M.E (Electronics & Telecommunication) from AMGOI, Vathar.

Mr. P. B. Ghewari working as an Associate Professor (E&TC Dept.) at AMGOI, Vathar. He has published many research papers in national and international journals.