Emergency location tracker for women safety

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ABSTRACT
The women’s safety is one of the greatest challenge faced by Indian society today. The paper describes unique approach for the solution of this problem. The “SOS” device which is describe in this paper Arduino based GSM security system for women’s safety. The device works on a single button press and sends SOS message and location of device to predefined mobile numbers. This device gives opportunity to women to call for help in difficult situation. The device is in two parts and smaller part is handheld small in size which can be developed as a carriable key chain sized gadget to provide is ease of use. the larger part can be a battery-operated device which works as CPU for entire system completely market developed device can give a unique and comfortable handheld solution to women of every background.

Keywords- Arduino, women’s safety, RFID, GPS, gsm based system

I. INTRODUCTION
India is second largest country in the world in terms of population. In cities like Mumbai, Delhi app also has SOS functionally and can also send SMS if stuck in a non-internet area. Bangalore & other densely populated areas women’s safety issue has been one of the India is second largest country in the world in terms of population. In cities like Mumbai, Delhi app also has SOS functionally and can also send SMS if stuck in a non-internet area. Bangalore & other densely populated areas women’s safety issue has been one of the most critical problems being faced by society & low & order. India ranks even lower than countries like Pakistan & Bangladesh in women safety index [source 1] according to India ranked a low 122 on a list of the world’s happiest countries published under a UN initiative. There have been many steps taken by the central & state government take this issue. No of women cab drivers has increased. No of women in police force has been increased &many apps has been designed for women safety. The semantic meaning of “crime against women” is direct or indirect physical or mental cruelty to women. Crimes directed specifically against women and in which only women are victims are characterized as “crimes against women”.
Cruelty by husbands and relatives under section 498-A of India penal code is the major crime committed against women across the country, with 909,713 cases reported over the past 10 years.
Women safety has become the utmost priority of the Indian government considering the increasing cases of crime against women. There are various safety apps present on the play store designed for the protection and security of women.

**RAKSHA – women safety alert**

The raksha app is designed to ensure that women stay safe always. The app comes equipped with a button, which will send alerts to your loved ones with your location in a situation of distress. You can select the contacts, which will be able to see your location. Moreover, if the app is switched off and is not working then also you will be able to send alerts by simply pressing the volume key for three seconds.

The app also has SOS functionally and can also send SMS if stuck in a non-internet area.

**Himmat –**

The himmat app is free safety app recommend for women by the Delhi police. In order to use the app, the user has to register at the Delhi police website. Once the registration is complete the user will receive an OTP, which has to be entered at the time of completing the app configuration.
In a problematic situation if the user raises the SOS alert from the app, the location information and audio video will be directly transmitted to the Delhi police control room following which the police will reach the location. The need of urgent help in cases of women’s harassment & sexual offenses is critical. The goal of the project presented in this paper is to give women a way to communicate with their family or friends or police with a single click. The purpose of device is to fulfill the need of a technology based solution on the presented issue. The areas where women work, the roads, educational institutes’ even hospitals are becoming increasingly dangerous for a lone woman. We intend to provide a stand-alone system which can provide a single touch SOS communication system for today’s women. The device is a battery operated standalone system which does not need even any training for its use. the system provides a single button, by pressing which a preformatted message containing the latitude-longitude. Position co-ordinates of devices position to mobile numbers pre-added to system upon receiving the message the receiver can then directly access the location of the device on Google maps.

II. LITERATURE SERVEY


In today’s world, women safety has become a major issue as they can’t step out of their house at any given time due to fear of physical abuse and violence. This safety device consists of a microcontroller, a temperature sensor, a heartbeat sensor and an emergency pushbutton switch. On sensing the emergency situation, this device fetches the current location of woman and sends it to emergency contacts via Global System for Mobile module. The heartbeat rate and temperature are also displayed on an interfaced Liquid Crystal Display. the Women Safety Device was successfully able to fetch heartbeat and temperature readings of a woman’s body. A threshold condition of 100 beats per minute and 38°C was set above which the buzzer would turn on, after turning on, then sent the message to the police and known relatives. The sent message includes the current position of the woman which is fetched by the location tracking GPS module. When the device was turned on, readings displayed on the LCD screen were zero beats and room temperature respectively.


The main purpose of our project is to provide safety to the women from the dangerous zone. This project describes about a one touch alarm system for women’s safety using GSM. The device which ensures the protection of women. This helps to identify protect and call on resources to help the one out of dangerous situations. Anytime you sense danger, all you had to do, is hold on the button of the device. The device consists of a AT89S52 microcontroller, GSM module, GPS modules. The system resembles a normal device which when activated, tracks the place of the women using GPS and Force sensor and sends emergency messages using GSM to wireless SOS key contacts and the police control room. The main advantage of this system is that the
user does not require a Smartphone unlike other applications that have been developed earlier. The use of sophisticated components ensures accuracy and makes it reliable. The system provides with all the features which will leave no stone unturned to help the dupe in any kind of emergency situations.


According to the reports of WHO, NCRB-social-government organization 35% Women all over the world are facing a lot of unethical physical harassment in public places such as railway-bus stands, foot paths etc. In this paper the authors have reviewed of various existing systems on women security. The authors have felt a need of advanced women security system to provides the safety measure in public places as well as travelling alone through public transports (school buses, company vehicle etc.). This paper proposed a new model for the women security in public places which aims to provide the 100% safe environment. It can be system helps to supports the gender equality by providing safe environment to women in the society, and allows them to work till late nights.


In this project Women all over the world are facing and even subjected to physical harassment. Security for women is still a major issue as the number of crimes and harassment over women and girls is increasing day-by-day. In this age of technology, mobile phone is one of the gadgets that almost everyone like and uses to keep in touch with family and friends. All they need is a device that can be carried everywhere easily. The component uses of the Microcontroller, 16x2 LCD GPS Modem, GSM Modem Relay, Shock generator. the women using which a woman in can call for help just with the press of a button on this smart gadget. Self Defense module for women safety is like a Smart Watch for Women safety. It has a control button that will be used by women to inform nearby police when they are in distress. This watch directly gets connected to the satellite through GPS when activated. Then the location is transferred through the GSM, it also contains a shock mechanism to produce non-lethal electric shock in emergency situations to deter the tracker.

III. METHODOLOGY

The system comprises of sections which describes a quick responding, cost protection system for an individual and especially for women using which a woman in distress can call for help just with the press of a button on this smart gadget. Self Defense System for women safety is like a Smart Watch for Women. It has the ability to help women with technologies that are embedded into a compact device. The women wearing this device as a watch or band, in case of any harassment or when she finds that someone is going to harass, she presses a switch that is located on the watch or band or when the women has fallen the information about the attack along with the body posture and location information is sent as SMS alert to a few predefined emergency numbers And
soon help is on its way! The system will consist of embedded hardware and software co-designed for this dedicated application.

The system allows for knowing exact location of the individual, as soon as the trigger key on the belt is pressed. By providing the instant location of the distressed victim to the police so that the incident could be prevented and the culprit apprehended. In case if the caretaker wants to know the present location of the lady, she can do so by sending a SMS to the SIM number of the lady which contains a secret password. Then this system responds to such request by sending back a SMS containing location information in terms of Latitude and Longitude. The gem module sends a SMS which contains the Google map location pin using this we can directly find the actual location of our ‘women so device’. The Google pin shows the location directly inside the Google map website.

3.1 BLOCK DIAGRAM

![Block Diagram for Women's Safety](image)

**Arduino Uno**

Arduino is open source platform used for building electronics project. Arduino consists of both a physical programmable circuit board and piece of software, or IDE (Integrated Development Environment) that runs on your computer, used to write and upload computer code to the physical board.

**LCD Display**

LCD (Liquid Crystal Display) screen is an electronic display module and find a wide range of applications. A 16x2 LCD display is very basic module and is very commonly used in various devices and circuits. These modules are preferred over seven segments and other multi segment LEDs. The reasons being LCDs are
3.2 FLOWCHART:

ADVANTAGES:
- Can be used for the safety of women.
- Can be used for the safety of children.
- Can be used for the safety of elderly aged people.
- Can be used for the safety of physically challenged people.

IV. RESULT
GSM Module Sends SMS Which Contains Google Map Location Pin Using This We Can directly finds exact location of our ‘Women SOS Device’. The Google pin shows location directly inside the Google map web side.

V. CONCLUSION
GSM module sends a SMS which contains the Google map location pin using this we can directly find the actual location of our ‘women SOS device’.
The Google pin shows the location directly inside the Google map web site because the level of security can be increased more by electronics assistance device in the vehicle, which can track the journey or women passenger, and ensure she has completed journey without any problems, this will provide a unique solution to the presented problem of all women and their parents, kids or husbands will also feel stress free as they are virtually in touch during complete journey.
REFERENCES


