

Smart Security Device for Women Safety

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Abstract— This Project presents a women safety detection system using GPS and GSM modems. The system can be interconnected with the alarm system and alert the police station and relatives. This detection and messaging system is composed of a GPS receiver, Arduino board and a GSM Modem. GPS Receiver gets the location information from satellites in the form of latitude and longitude. The arduino board processes this information and this processed information is sent to the user using GSM modem. A GSM modem is interfaced to the MCU. The GSM modem sends an SMS to the predefined mobile number. When a woman is in danger and in need of self-defence then she can press the switch which is allotted to her. By pressing the switch, the entire system will be activated then immediately a sms will be sent to concern person with location using GSM and GPS.

Keywords— *GPS; GSM; Arduino Board; Microcontroller.*

I. INTRODUCTION

As the threat against the women increases rapidly, here we propose a system in order to provide a security precaution, so that women never feel helpless while facing social challenges. At present days, Women's security plays an important role; it has always been a concern for many people and committees around the world. It becomes apparent when we look out wherein the identity of woman has been misunderstood by a few individuals, so an attempt must be made in order that which doesn't harm their social status.

This paper quite concerns to a wireless technique in the form of embedded device namely Arduino for women and children. This model can be designed in such a way that detects the location of victim and allows the rescue system to take action accordingly, based on the electronic gadgets like GPS, Buzzer. A prototype which is easy to use and provides a help for the victim. The system that which resembles normal clothes which when turned on it tracks the location of victim using GPS services to necessary emergency contacts and police control room. Thus this helps the victim against attacker for self defence.

A. Literature Survey

[1] Authors here discuss about the present scenario of security to women is very less and in order to provide security to women is very essential. Hence to provide the security, an application is to be built and given with sufficient data like human behaviour. It has to be accessed to GPS services. This application can detect the location and check the condition of women health by which actions can be taken accordingly. Hence this proposed system help in dealing with the problem

faced by women which can be solved with technical knowledge.

[2] Nowadays the important issue in the society is women safety. In this paper the model will help to protect the women from the attackers. The proposed model contains various devices like GPS, GSM and panic button. Here GPS is used to detect the location of the device. This paper model is proposed a band which will provide to a women so that they can do work at late night. In this paper to ensure a security to a women in the society by providing sending of threats and sends a notification to their relatives and nearest police station.

[3] In this paper, the author discussed about how the system is designed to ensure women's security. This system is used to locate women based on GPS technology. In this way, the signals that have been created are sent to the board, manage the signals and provide SMS services, so emergency calls can be shared with the location of the coordinates to save women from harassment.

[4] Today in this world the women are being molested, kidnapped and harassed by physically strong people. So to ensure safety and security of women the idea of smart device is built which is comfortable and very easy compared to other bulky system which already exists? This paper proposes the dangerous issues faced by the women and it will help in finding the culprit easily with help of high technologies. And it will be easy to implement in different areas for security and surveillance of women.

[5] This paper is all about providing safety to women on designing the smart device. This device helps to identify the critical situation of women. Women safety has become major issue in day to day world. They can't have real freedom as the men as since they are not physically strong enough. Thus in dangerous situations this will act as protecting hand. This uses GPS and GSM module with Arduino device. When a woman feels insecure in any situation she can press the wireless key which provides the location from GPS and GSM. This design helps to handle the dangerous situation faced by women. This paper also helps for the further development of the design by providing the basic and the technical information.

[6] In our country there is no safety for women so this paper is designed for women in emergency and in distress. It is simple and easy to use. Many people uses smart phase which has many applications and it is useful to people if any emergency occurs then our intension is to provide you with

the fastest and simplest way to contact to your nearest help by clicking the push button by using an GPS that which sends the location as well as notification to the registered numbers and also to the near rescue system. This can also help police department in order to reduce the crime which are against women those evidence can be used in tracing the crime. The goal of this system is to provide security to the women.

II. OBJECTIVE

Security is a condition for protection against accidents or losses. In general, security is a concept similar to safety. The difference between the two is an additional emphasis on protecting from external accidents. Individuals or activities that violate the terms of protection are liable for any breach of security. The word "safety" is a general term for "safety", but a "safety" technique means something not only true but also safe. This project was designed by ATmega328. This project demonstrates women's security systems using the GPS and GSM modules. The system can connect to the alarm and warn neighbors. This messaging and messaging system has a GPS receiver, an umbrella controller, and a GSM modem. GPS receivers get location information from satellites in latitude and longitude. The microcontroller processes this information, and this processing information is sent to the user through the GSM modem. The GSM model is connected to the MCU. The GSM module sends SMS messages to a pre-defined phone number. When a woman is in danger and needs self-protection, she can press the switch provided. By pressing the key, the whole system will be activated, and then a SMS will be sent to locate a person using GSM and GPS.

III. PROBLEM STATEMENT

In the latest horrific incident in Jammu and Kashmir, we have shocked the nation and warned us about women's safety and security. In regards to issues, people have different means of protection. Finally, tools should be introduced to ensure women's protection with different technologies.

IV. PROBLEM SOLUTION

This is a system that is provided for women's security purposes. The building system has security tools that can help women in their trouble to track emergency callers to send information through notifications during the incidents by pressing the button on the device immediately. The victim's place will be followed by GPS tracking to nearby family members and police stations.

V. PROPOSED SYSTEM

The figure below shows the modules are mounted together onboard.

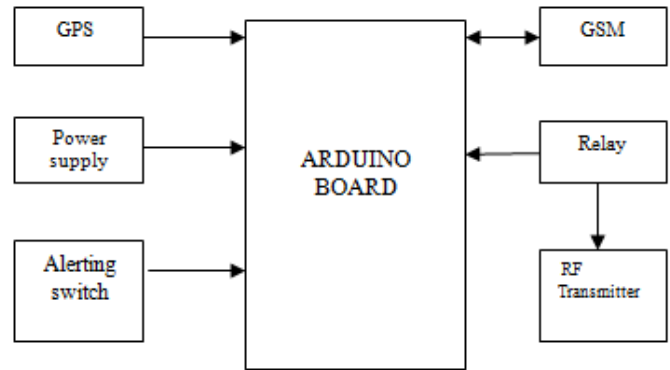


Fig.1: Transmitter end of women security device

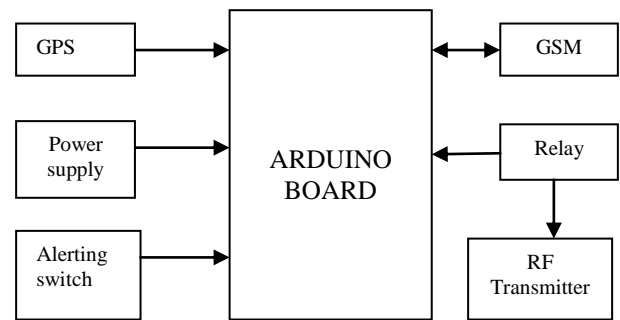


Fig.2: Receiving end of women security device

Proposed model is a wearable model. The block diagram of transmitter part is shown in fig (1). After giving power supply to the device and when a woman is in danger and in need of self-defense then she can press the switch which is allotted to her. By pressing the switch, the entire system will be activated then immediately the signals are sent to the Arduino board, it processes these signals and immediately the information is sent to the user. A GSM modem is interfaced to the Arduino. The GSM modem sends an SMS to the predefined mobile number with location of the victim using GPS and GSM. The block diagram of receiver part is shown in fig(2). This system would be present in the nearby police station. Whenever, the panic button is pressed by the victim the receiver receives the signals and the buzzer sounds and the location of the victim would be displayed on the LCD screen.

Advantages

- Sophisticated security.
- Monitors all hazards and threats.
- Alert message to mobile phone for remote information.
- Mobile number can be changed at any time.

Limitations

All the system must be connected to the GSM and GPS module to work properly, hence cannot be used during emergency if there is no internet connectivity. Mischance of arriving rate.

VI. EXPERIMENTAL RESULTS



Fig.3: Transmitting end of women security device



Fig.4: Receiving end of women security device



Fig.5: Message sent to mobile

VII. CONCLUSION

Our efforts behind the project are to set up and manufacture a small, self-contained component in itself, which benefits from a personal safety system, which is an immediate response system for women in crime incidents. It is a low cost system that can keep records of specific members in a particular area and provide immediate caution in criminal cases against women. This provides safety for women. Safety and security are the needs of the day.

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