

Safety Guard for Women

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Abstract- Children and women are facing many security problems nowadays. So in such cases they feel handicap and need help to protect them. In the light of recent outrage in KOPARDI which shook the nation and woke us for the safety purpose for women, people are finding up in different technique to defend. Hence there must be a system which can protect them in such difficult situation. This paper suggests a new technology for a women safety with one facing such social problems or challenges. Here we introduced a device which ensures the protection of women. The problems we have overcome here using GSM, GPS and force sensor. Anytime when women sense danger only button is to be pressed on the device. In such case GPS tracks the location of the women and send emergency message using GSM to saved contacts and police control room. The system proven that it is providing complete security to women's and kids wherever we are using it.

Keywords- SMS, Global Positioning system(GPS), Arduino nano ,Global System for mobile(GSM), Smart Watch, Women Safety, Self-defense.

INTRODUCTION

The status of women in India has gone through many great changes over the past few thousand years. The proposed device is more like a safety system in case of emergency. This device can be fitted in a jacket (similar to a blazer for women). It is an easy to carry device with more features and function. The emergency push button is held to one of the button's of the jacket. The main purpose of this device is to intimate the parent's and police about the current location of the women. A GPS system is used to tress the current position of the victim and a GSM modem is used to send the message to the pre-defined number's. There are several application's that reduce the risk of sexual abuse by sending SMS but in our model we also provide an audio circuit which is more useful for physically challenged people. Self defense module for women safety is like a smart watch for women safety. It has the ability to help women with technologies that are embedded into a compact device. It has the potential to help women with technologies that are embedded. It is specially designed for women safety and protection. 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.

RVIEW OF LITERATURE

PAPER 1 SHOWS THAT, In today's society it's frequently seen that Girl's are getting exploited by Men in different ways. Social evils like molestation, dowry, crime against women, worst among all is rape is on the rise in many countries. Incidents of crime against women have been increasing at an alarming pace in Indian cities, most common incidents being rape kidnapping, sexual harassment and eve teasing. Security for women is still a major issue as the number of crimes over women and girls is increasing day-in-day.

PAPER 2 SHOWS THAT, The status of women in India is having a large history. There is a further dominating system in India. In older days women used to stay in home for the household work. But now a day the present scenario is that women are working equally as of men. In each field there is a special impact of women. Like sports, dance,

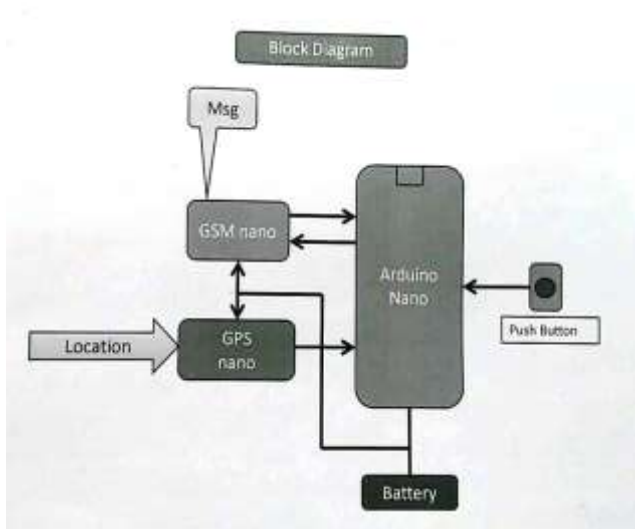
education, business, in politics also. Women are leading in each and every field. But still there is a safety issue of women.

PAPER 3 SHOWS THAT, The device described here is a self defense system specially designed for women in distress to help them to protect themselves. This device can be fitted in a purse, belt or fitted to the girl's sandals and the panic button attached to the belt. The lady in danger can activate the system by pressing emergency button on belt or tilting her sandal. It is a simple and easy to carry device with wide range of features and functionality. The basic approach is to intimate instant location and a distress message to the cops and registered number like parents, friends, media, and women cell etc. So that unfortunate incidents would be averted would be averted and to provide real time evidence for swift action against the perpetrators of real time evidence for swift action against the perpetrators of crime against women.

PAPER 4 SHOWS THAT, Now a day's attacks on women is increasing day by day and in the case of where she can't take a mobile and dialup to police or other family members, our proposal will be very much helpful in such cases in not only informing about attacks but also in giving the exact location of the women to nearby police station for necessary action. 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 physical/sexual abuse and a fear of violence. Even in the 21st century where the technology is rapidly growing and new gadgets were developed but still women and girls are facing problems.

PAPER 5 SHOWS THAT, From the equal status with men in ancient times through the low points of the medieval period to the promotion of equal rights by many reformers, the history of women in India has been eventful. In modern India, women have adorned high offices in India including that of the President, Prime Minister, Leader of the Opposition and speaker of the Lok sabha.

SYSTEM BLOCK DIAGRAM



1) GPSMODULE : This is a GPS receiver (5V serial) with high gain having 4 pin 2.54mm pitch strip. The third generation POT(Patch Antenna on Top) is used by the receiver for the GPS module. It can be interfaced with normal 5V microcontroller with the help of the in build 3V-5V convertor.

It is a navigation and precise positioning tool, track the location in the form of latitude and longitude based. The GPS coder module used this information to search an exact address of that location as the street name, nearby junction etc. In case where GPS is disabled then the system will only send the longitude and latitude.

GPS consist of the following three segment:-

- Space segment (GPS satellites) – A number of GPS satellite are deployed on six orbits around the earth at the altitude of approximately 20,000km (four GPS satellite per one orbit), and move around the earth at 12 hour intervals.
- Control segment (Ground Control Stations) – Ground control stations play roles of monitoring satellite orbit to make sure that the deviations of the satellite from the orbit as well as GPS timing are within the tolerance level.
- User segment (GPS receiver)

2) GSM System Module

Global system for mobile communication (GSM) SIM card inserted inside the mobile device to send and receive the message using GPRS. The GSM SIM Card number is registered with the system. With increasing usage of GSM, network services are expanded beyond speech communication to incorporation many other custom application, machine automation and machine to machine communication.

Specification of GSM –

- Over supply :- Single supply voltage 9V to 12V (DC).
- Onboard power ON and Network indicated LED.

- Onboard provision to select the power on mode of manual or auto using jumper.
- RS232 output to connect directly to computer.
- Serial TTL onboard pin to directly connected to microcontroller.
- Onboard Audio (Speaker and microphone) interface pins.
- Onboard PWM and ADC channels.

3) Arduino Nano module

The Arduino Uno is a microcontroller board based on the ATmega328 (datasheet). It has 14 digital input output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16-MHz ceramic resonator, a USB connection, a power jack, an ICSP header and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with AC to DC adapter or battery to get started.

The Uno differs from all preceding boards in that it does not use the FTDI USB-to-serial driver chip. Instead, it features the ATmega16U2 (ATmega8U2 up to version R2) programmed as a USB-to-serial converter. Revision 2 of the Uno board has a resistor pulling the 8U2 HWB line to ground, making it easier to put into DFU mode.

4) PUSH BUTTON

When it is pressed then it will send signal to microcontroller, then microcontroller will send the GPS coordinates via GSM to the police station or to the family members.

WORKING METHOD

Aim of the proposed algorithm is to help women by the technologies that are embedded in it. Smart watch for women is specially designed for women safety. When the supply is given the device will turn ON. GPS and GSM connected to Arduino also start working and it displays the current position of device.

Then with the help of GPS the location (latitude and longitude) of the victim is detected. 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.

- Low cost with high performance.
- Environmental friendly system.
- Women can go anywhere with more server.
- Avoids the women rape.
- Culprit can be easily found and can be punished.
- Consumes less power.
- Provides very accurate data via GPA system.
- Allow the remote location of asset from anywhere there is cellular service.
- Facilitates simple asset recovery and tracking.

FUTURE SCOPE

In future, we also interface this system with smart phone or mobile. In this project we can further implement zapper and paper spray can be used. Primary school children safety. Vehical safety system module. Mobile and other valuable's safety system module. The concept can be used to provide the security for physically challenged girl's by adopting voice recognition kit. It can be used in the military applications to track the soldiers. The device can be used in the adventure related events. Wearable technology, wearable's, fashionable technology, wearable devices, tech togs, or fashion electronics are clothing and accessories incorporating computer and advanced electronic technologies. The designs often incorporate practical functions and features. Wearable devices such as activity trackers are a good example of the Internet of things, since they are part of the network of physical objects or "things" embedded with electronics, software, sensors and connectivity to enable objects to exchange data with a manufacturer, operator and/or other connected devices, without requiring human intervention.

CONCLUSION

Being safe and secure is the demand of the day, our effort behind this project is to design and fabricate a gadget which is so compact in itself that provide advantage of personal security system. This design will deal with most of the critical issues faced by women and will help them to be secure. Existing systems provide the mechanism to track the vehicle but no other emergency mechanism is proposed. The proposed mechanism provides viewing the location of the victim is terms in terms of latitude and longitude which can further be tracked using Google maps. This system helps to decrease the crime rate against women.

Women's security is a critical issue in current situation. This crimes can be brought to an end with the help of real time implementation of our proposed system.

REFERENCES

- [1] Moser, c. and c. mcilwaine (2006), "Latin American urban Violence as a development concern: towards a framework for Violence reduction", World Development, Vol. 34, no.1, pp.89-112.
- [2] Hill, r., J. temin and L. Pacholek (2007), "Building Security where there is no Security", Journal of Peacebuilding and Development, Vol. no.2, p. 38-51.
- [3] Reardon, op. cit., "Feminist Concepts of Peace and Security," p. 139.
- [4] G. Bharathi,"Implementation of children tracking system using Arm7Microcontroller," International journal of Industrial electronics and electrical engineering, ISSN:2347-6982, Volume-2.
- [5] Rashmi Deodhe,"Women security system by using GPS and GSM", International journal for engineering applications and technology, ISSN:2321-8134.
- [6] Abid khan, Ravi Mishra, "GPS-GSM based tracking system", international journal of engineering trends and technology-volume3issue2-2012.
- [7] Electronic circuit guide book – By: JOSEPH& J. CARR.
- [8] Microcontroller & Embedded systems by Ankaj Gupta.
- [9] Poonam Bhilare¹, Akshay Mohite², Dhanashri Kamble³, Swapnil Makode⁴ and Rasika Kahane⁵ "WOMEN EMPLOYEE SECURITY SYSTEM USING GPS AND GSM BASED VEHICAL TRACKING" in international journal for research in emerging science and technology, volume-2, issue-1, January-2015.
- [10] H. A. Abdullah Dafallah "DESIGN AND IMPLEMENTATION OF AN ACCURATE REAL TIME GPS TRACKING SYSTEM" in e-Technologies and Networks for Development (ICEND),2014 Third International Conference.
- [11] www. Engineers Garage.com
- [12] Design of women safety system using RFID,"8051microcontroller and GSM based technology prototype",ShaikMazhar Hussain¹, ShaikJhani Bhasha².