ISSN 2454-8065 International Journal of Applied Theoretical Science and Technology
Volume 15, Issue 07, pp01-06 15th October 2022

A PORTABLE DEVICE FOR WOMEN AND CHILD SAFETY TRACKING USING IOT

*Dr.N. Suresh.
Head of The Department
Electronics & Communication Engineering Department
AVN Institute of Engineering & Technology
Hyderabad Telangana, India
sridhar.ch@avniet.ac.in

Dr.R.Purushotham Nayak
Professor
AVN Institute of Engineering & Technology
Hyderabad Telangana, India
Soumyakeshapaga@gmail.com

PalthiyaShirish
Shirishpalthiya666@gmail.com
PillarisettyJayasritha,
jayasrithapillarisetty@gmail.com
SurakantiPallavi,
Reddypallavi882@gmail.com
OrsuHarish,
Orsuharish873 @gmail.com
Electronics & Communication Engineering Department
AVN Institute of Engineering & Technology Hyderabad
Telangana, India

Abstract : Now-a-days children and women are facing many security related problems. In such situations, they are helpless and don't have any way to protect them or inform it to their family members, neighbors or police station and they feel down. The amount of violence against women has been increasing day by day. Women and children safety in India has become a contentious issue as result of such crimes. The crime rate is on the spike.

The main objective of this project is to give security to the women and child. As we are daily coming across various incidents occurring in our country it either be child kidnapping or women trafficking. Technology is the most effective means of resolving this issue. As a result, we create this to save and protect women and children during the crises. The problems faced can be resolved by this project.

1. INTRODUCTION

Women safety and child protection are the major issues taking place in today's world. The world is becoming so much unsafe for women. In the current scenario most of the women are stepping out for various activities. Even though many technologies have been introduced for women but still kidnapping, eve teasing and sexual harassment are taking place in our country. In last few years the crime as increased a lot. Around 80% of the people in our country have fear regarding their children and women safety.

Child protection is very important in the current society as so many abnormal incidents are taking place across the world. They should be safeguarded from violence, exploitation, abuse and neglect.

The protection can be done through various aspects by different systems. Each system use a different kind of techniques to detect the unsafe situation of women. Some of them used panic sensors to detect the condition of the women by heartbeat and temperature change in women's body.

Sound detectors are also used to detect the variations in women voice while they are in danger situation. Most systems use mobile devices for detecting women's unsafe situations, such as phone mike to detect women scream, camera to take pictures and to record video. They are different existing mechanism used for ensuring the safety of women and children when they are away from home.

The project is developed with the help of the IOT (Internet Of Things). This project main objective is to provide safety

ISSN 2454-8065 International Journal of Applied Theoretical Science and Technology
Volume 15, Issue 07, pp01-06 15th October 2022

over the danger which comes across. In this paper, we surveyed the situation faced by the women. When the women face into unsecured situations, to ensure the safety, automatic detection system needs to developed which send an alert message to the police department and people.

2.EXISTING SYSTEM

In the existing model the system is designed in such a way that it provides the security to the women and children by tracking their location. The systems can be of different modules with different security measures. For the security purpose the application contains the SOS(Save Our Souls) number which will alert the family members of the victim. In the existing system when women face a threat, the system gives an alert to the registered mobile number in sos application but precautionary measures were low. Various systems used technologies such as SOS message, GSM and Wi-Fi networks for communications. Every system uses GPS tracking and gives the alert. This system has various drawbacks like SMS delay due to the network issues, signal lost. It does not work in real time tracking.

3.PROPOSED SYSTEM

In the proposed systemhere we designed equipment for alerting the system. In this project we used the NODEMCU controller for the controlling the whole process of the system.
The GSM is used to send notification regarding GPS locations. TCP TELNET APP is for displaying and switch is pressed when the person is in danger and sensor for Fall Detection.
Here we are adding Buzzer and Shock pin which will activate when the women press the switch.

4.DESIGN OF THE PROPOSED SYSTEM

A.NODEM CU

NODEMCU is an open-source firmware and development kit that plays a vital role in designing your own IOT product using a few Lua script lines .Multiple GPIO pins on the board allow you to connect the board with other peripherals and are capable of generating PWM, I2C, SPI, and UART serial communication. The interface of the module is mainly divided into two parts including both Firmware and Hardware where former runs on the ESP8266 Wi-Fi SOC and later is based on the ESP-12 MODULE .The firmware is based on LUA – A scripting language that is easy to learn, giving a simple programming environment layered with a fast scripting language that connects you with a well-known developer community.

B.GPS

The Global Positioning System (GPS) is a U.S. space-based radio navigation system that provides reliable positioning, navigation, and timing services to civilian users on a continuous worldwide basis -- freely available to all. For anyone with a GPS receiver, the system will provide location and time. GPS provides accurate location and time information for an unlimited number of people in all weather, day and night, anywhere in the world.

The GPS is made up of three parts:

1. Satellites orbiting the Earth

2. Control and monitoring stations on Earth

3. The GPS receivers owned by users.

GPS satellites broadcast signals from space that are picked up and identified by GPS receivers. Each GPS receiver then provides three-dimensional location (latitude, longitude, and altitude) plus the time.

C.BUZZER

A buzzer or beeper is an audio signaling device, which may be mechanical, electromechanical, or electronic.

ISSN 2454-8065 International Journal of Applied Theoretical Science and Technology
Volume 15, Issue 07, pp01-06 15th October 2022

Typical uses of buzzers and beepers include alarms, timers and confirmation of user input such as a mouse click or keystroke.
The PB series are high-performance buzzers with a ceramic element and an integral self-excitation oscillator circuit.
• They exhibit extremely low power consumption in comparison to electromagnetic units.
• They are constructed without switching contacts to ensure long life and no electrical noise.
• Compact, yet produces high acoustic output with minimal voltage.

D.LED

- A **light-emittingdiode (LED)** is a semiconductor light source that emits light when current flows through it. Electrons in the semiconductor recombine with electron holes, releasing energy in the form of photons. The colorof the light (corresponding to the energy of the photons) is determined by the energy required for electrons to cross the band gap of the semiconductor. White light is obtained by using multiple semiconductors or a layer of light-emitting phosphor on the semiconductor device.
- **E. TCP TELNET**

TERMINAL(IOT APPLICATION):
Telnet (short for "teletype network")[1][2] is a client/server application protocol that provides access to virtual terminals of remote systems on local area networks or the Internet.[3] Telnet consists of two components: (1) the protocol itself which specifies how two parties to communicate and (2) the software application that provides the service. User data is interspersed in-band with Telnet control information in an 8-bit byte oriented data connection over the Transmission Control Protocol (TCP). Telnet was developed in 1969 beginning with RFC 15, extended in RFC 855, and standardized as Internet Engineering Task Force (IETF) Internet Standard STD 8, one of the first Internet standards.[1][2] Telnet transmits all information including usernames and passwords in plaintext so it is not recommended for security-sensitive applications such as remote management of routers.[3][4] Telnet's use for this purpose has waned significantly in favor of SSH.[5] Some extensions to Telnet which would provide encryption have been proposed.[6]

5.BLOCK DIAGRAM

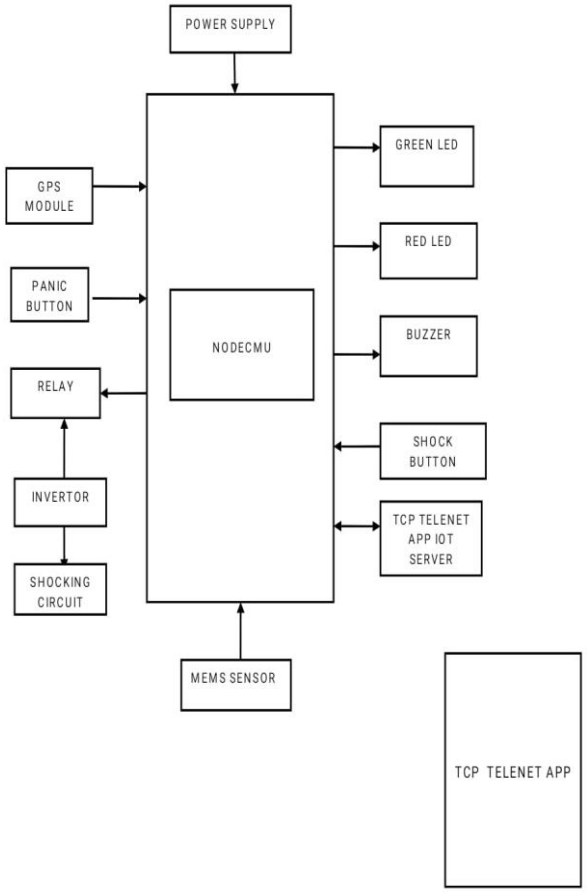

Fig1:Blockdiagramofthesystem

ISSN 2454-8065 International Journal of Applied Theoretical Science and Technology
Volume 15, Issue 07, pp01-06 15th October 2022

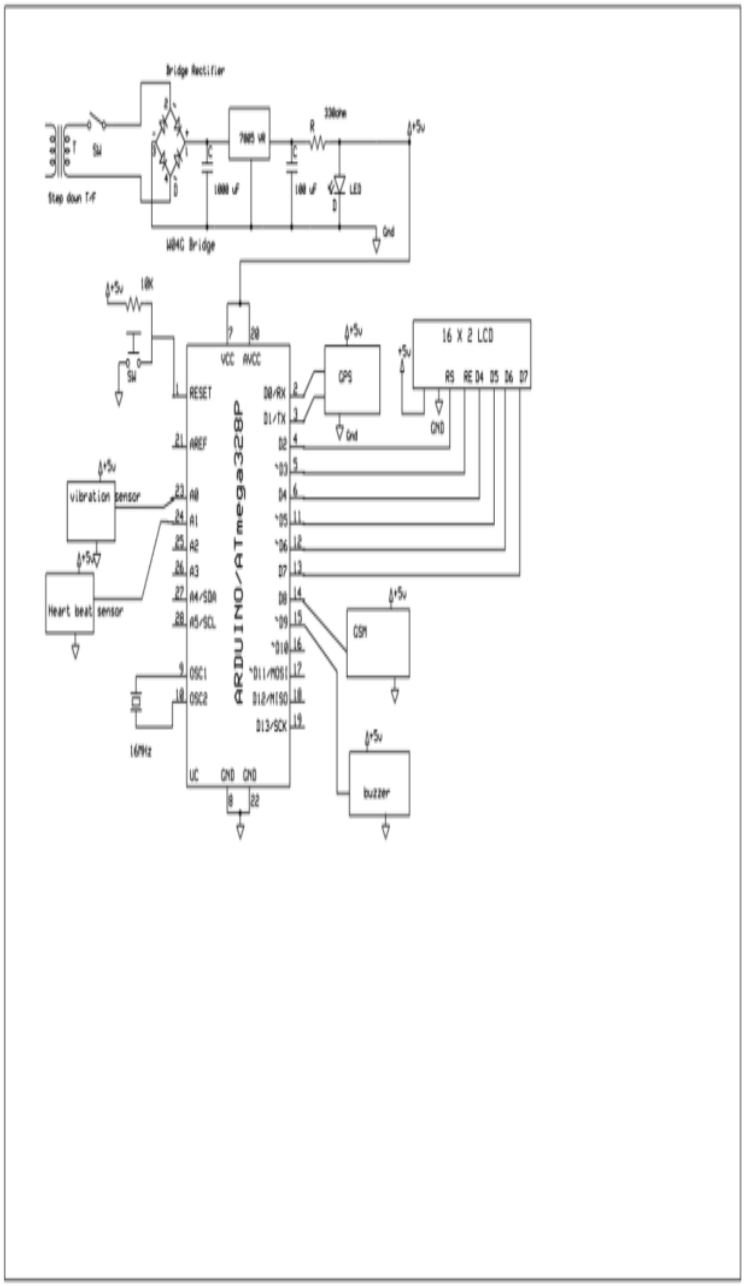

Fig:2:Linediagramofwomensecuritysystem

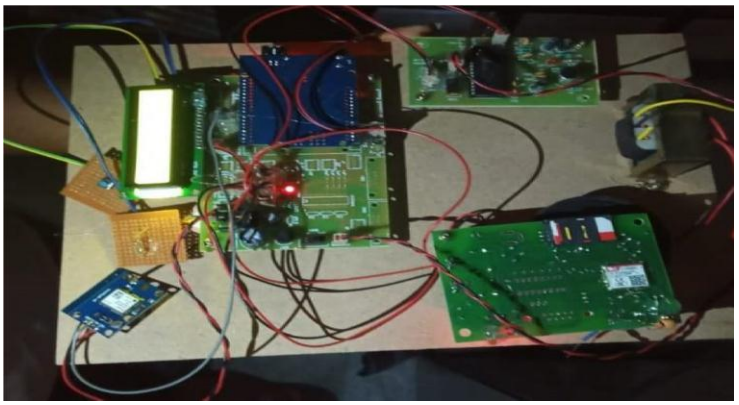

Fig:3:Womensecuritysystemkit

6.WORKINGPRINCIPLE

In this system mainly using the NODEMCU with GPS communication technology to track the location of child and women when they were in dangerous situation ,when the user in dangerous then they press the panic button ,then automatically get the notification through IOT (esp8266) wireless protocol send the message to android application parallel shocking circuit is also activate by the electromagnetic type switch ,buzzer also make the sounds and the IOT application get location by the GPS, Even though if user fall down by any attack from some other people then the notification get to IOT application

SOFTWARESUSED:

Thisprojectisimplementedusingfollowingsoftware's:

- ExpressPCB–fordesigningcircuit
- PICCcompiler-forcompilationpart
- Proteus7(Embedded C)–forsimulationpart

7.ADVANTAGES

1. Efficientandlow costdesign.
2. Lowpowerconsumption

ISSN 2454-8065 International Journal of Applied Theoretical Science and Technology
Volume 15, Issue 07, pp01-06 15th October 2022

3. Easytooperate.
4. Fastresponse

ISSN 2454-8065 International Journal of Applied Theoretical Science and Technology
Volume 15, Issue 07, pp01-06 15th October 2022

8.APPLICATIONS

Thissystemwillbeanefficientsolutionforrealtimeappl ications to trackthelocation ofvehicle

9.RESULT

Theproject"**A PORTABLE DEVICE FOR WOMEN AND CHILD SAFETY TRACKING USING IOT"**is mainlyintended designed for the applicationstotrackthelocationof women and children and try to protect them.

10.CONCLUSION

From the above survey, we analyzed that GPS, IOT and sensor can be used to track only users nearby locations and can only send alert SMS to limited people. In the proposed system, there is a buzzer which alerts people when they are in danger, and mobile app ensures the safety of women by using a buzzer system, send alert SMS, the user will share location to their family members. A new system needs to be developed which can send alert messages automatically without human intervention. The accuracy level of detecting violation of women can be improved by sensing more physical human body parameters.

REFERENCES

[1] Dr.Velayutham.R,Sabari.M,SornaRajeswari.M, "AnInnovative Approachfor women and children'ssecurityBasedLocationTrackingSystem"0 nInternationalConference on Circuit, Power and Computing TechnologiesIEEE[ICCPCT]2016.
[2] Dhole,MobileTrackingApplicationforLocatingFri endsUsing LBS, International journal Innovative research incomputer and Communication Engineering vol:1, Issue: 2,April 2013.