

# Tracking And Security System for Women's using GPS & GSM

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**Abstract** - The mobile which will be useful in women security which would be controlled from anywhere else. It is also highly economic and less expensive; hence GSM is preferred most for this mode of controlling. In this application we are maintaining a switch. In the worst situation when we press panic key at that time with location place will be sent to the android mobile which is enrolled in the ARM7 should get a message like help needed. We are using LCD to display on the screen while sending message like (person is in trouble, please click the below link \*\*\*\*\*).

GPS gives only the longitude and latitude values but by using Android application in the mobile we can easily get the location name from where the message has been sent. The controller takes the switch as its input i.e. when some threat has occurred one need to press that switch and the controller makes the GSM module to message to the pre-stored number. In this way the concerned person will know the location and they will be able to save the candidate. With a wide range of serial communications interfaces, they are also very well suited for communication gateways, protocol converters and embedded soft modems. Addition to this purpose system Emergency key is also their whenever women feels she is in danger at that time she presses emergency key then buzzer makes a loud sound.

**Key Words:** ARM7, global positioning system (GPS), Buzzer, Global system for mobile communication (GSM), Panic Key, Emergency key, Heartbeat sensor.

## 1. INTRODUCTION

The status of women in India is having a large history. There is a father 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 the 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.

Are the girls in India are really safe? Always we get the answer No. However, women in India continue to face social challenges and are often victims of abuse and violent crimes. So we are going to design safety circuits for women in our project. This project focuses on a security for women so that they will never feel helpless. The system consists of various modules such as GSM shield (SIM 800), ARM7 board, GPS, panic key, Buzzer, Emergency key, heart sensors for

activation, Adaptor as power supply unit. The Delhi Nirbhaya case that triggered the whole nation was the greatest motivation for this system. It was high time we women needed a change.

## 1.1 Existing System

Keeping the same concern in mind many developers have come up with innovative applications. Few of such applications are as follows-

1. VithU app: This is an emergency app initiated by a popular Indian crime television series "Gumrah" aired on Channel in this app when the power button of the Smartphone is pressed twice consecutively, it will begin sending out alert messages with a link to the location of the user every two minutes to the contacts fed into the app.

2. SHE (Society Harnessing Equipment): It is a garment designed by three engineers from Chennai. This garment has an electric circuit that can generate 3800kv of current which can help the victim to escape. In case of multiple attacks, it can send up to 82 electric shocks. Since the fabric is bilayer, the user is not affected. It can also send emergency messages.

3. ILA security: The co-founders of this system, McGovern, James Phillips, and Neil Munn, have designed three personal alarms that can shock and disorient potential attackers and draw attention to dangerous situations.

4. USING PRESSURE SENSORS: The proposed system is to design a portable device which resembles a normal belt. It consists of ARM7 Board, threshold of the pressure sensor crosses, the device will get activated automatically. Immediately the location of the victim will be tracked with the help of GPS and emergency messages will be sent to three contacts and one to police control room every two minutes with updated location. The screaming alarm unit will be activated and will send out sirens to call out for help.

## 2. PROPOSED SYSTEM

The Aim of this project is to provide security to working and nonworking Women's. In this system, the security of women can be done with the help of the GPS and GSM. In this system, the GPS trace the location of woman which is in dangerous condition and with the help of GSM we can send the data to the number which is already save in the sim. The entire

control is resided with the ARM7. In addition to this, there is one panic key. When we press the trigger of this key then at that time the ARM7 start working the first GPS is trace the location of the woman and with the help of GSM the message will send to the number which is save in the SIM. The modification of this system Emergency key is also their whenever women feels she is in danger at that time she presses emergency key then buzzer makes a loud sound. The block diagram of this system shown below.

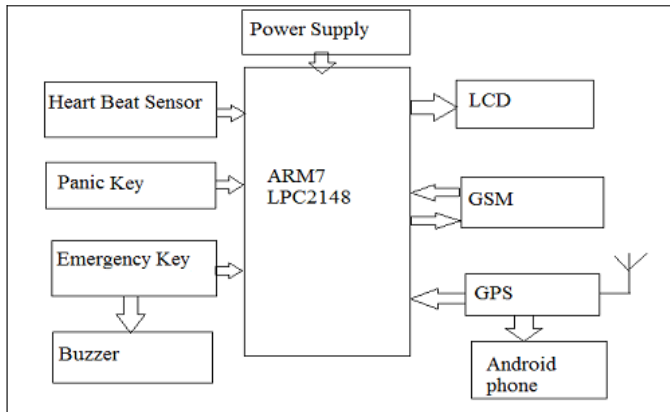


Fig-1: Block Diagram of System

### 3. HARDWARE SYSTEM DESIGN

The following figure shows the setup of the system. The ARM7 is an main part of an system with that GPS & GSM are used for tracking and sending sms & location of an women to the registered mobile. The registered mobile no is stored in the system.



Fig-2: Hardware Setup

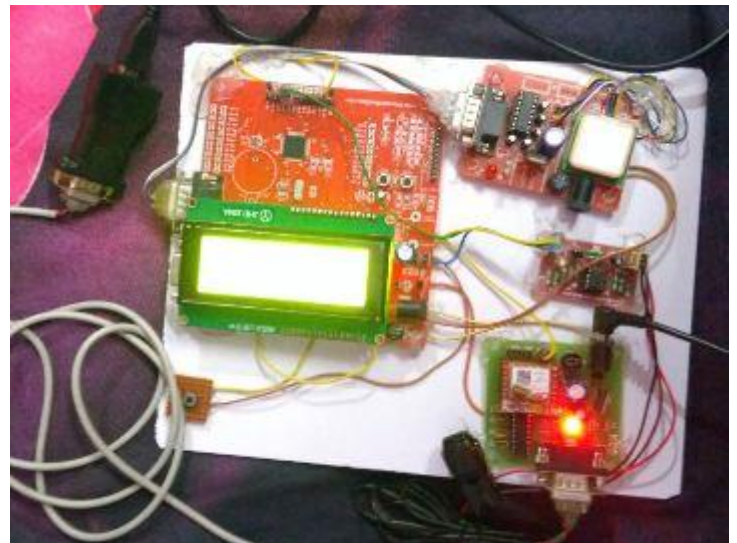


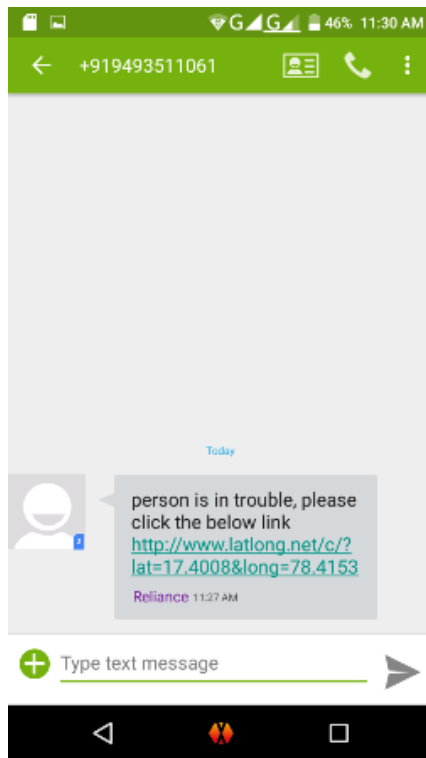
Fig-3: Supply provided to Hardware

The above figure shows when supply is provided to the system. The one side supply is through an adaptor to the GSM. Another side supply is connected through laptop by using USB to Serial adaptor. The output of the whole system shows on android mobile phone. When women presses the panic key the system starts working then through the message it sends location to the parental mobile phone. In this way the whole system works & the security of women can be done.

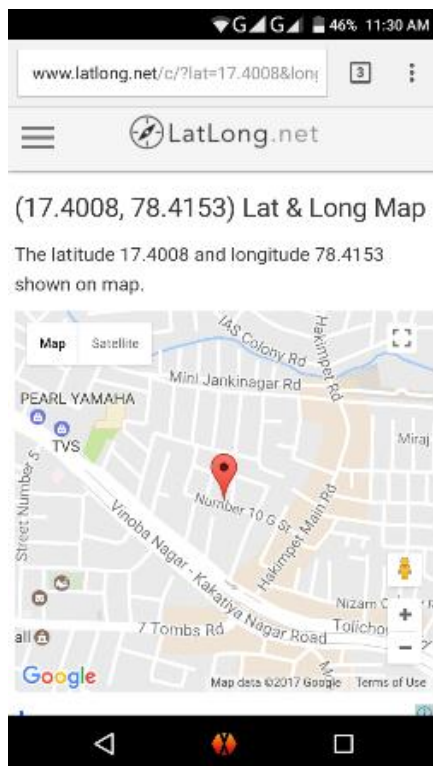
### 4. RESULT

The following snapshot 1 shows output of the system on mobile phone. When women presses panic key then through the ARM7 the message send to an registered mobile phone. the following is a screenshot of that android phone where that message received.

The snapshot 2 shows the latitude & longitude output on latlong.net. This link is already provided through the SMS which sends on registered mobile phone.



Snapshot 1: Message received on phone



Snapshot 2: Location of the women on latlong.net

## 5. CONCLUSIONS

In this project work, we have studied and implemented a complete working model using a ARM7. The programming and interfacing of ARM7 has been mastered during the implementation. This work includes the study of GSM and GPS modems using sensors. The biggest advantage of using this project is, whenever the switch is pressed we will be getting the location from GSM modem to our mobile numbers which are stored in program and GSM network so that one can save the women who is in threat. This system will help its users in difficult situation. This system would be highly sensitive and easy to handle. Its quick action response will provide safety and security to individual user.

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