



HUMAN SELF DEFENCE SYSTEM

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Abstract

In the last few years, crime against women in Delhi has increased. This project describes 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. It has the ability to help women with technologies that are embedded, into a compact device. This device can be fitted in a purse, belt or fitted to the girls 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.

In this project we are using GPS module to track the exact location of women and it can send help request along with the location coordinates to the nearest Police Station, family by sending SMS in terms of Latitude and Longitude. We are using PIC microcontroller for controlling the subsystems like GSM modem, LCD panel, etc.

Keywords: GPS: Global Positioning System, GSM: Global System for Mobile Communications, LCD: Liquid Crystal Display, GPRS: General Packet Radio Service, IDE: Integrated Development Environment, MODEM: modulator demodulator

unsafe. This proposal document 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 Defence System for safety is like small tiffin box a Smart Watch or belt for Women. It has the ability to help women with technologies that are embedded into a compact device. The women or childrens wearing this device as a watch or band or belt, in case of any harassment or kidnapping, 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 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. Then this system sending a SMS containing location information in terms of Latitude and Longitude. The Smart band integrated with Smart phone has an added advantage so as to reduce the cost of the device and also in reduced size. The GPS and the GSM can be used of a smart phone[2].

I. INTRODUCTION

By the survey of Delhi governments Women and Child Development Department, around 80 percent of the women in national capital have fear regarding their safety. Security for women is still a major issue. Mobile phone is one gadget almost everyone uses to keep in touch with family and friends. All they need is a device that can be carried around easily whenever the woman feels

II. BLOCK DIAGRAM

Here we can see that GPS module, GSM module, led are connected to the PIC micro controller and the switch, GPS system acts like input device. GSM, buzzer, LCD and led acts like output device.

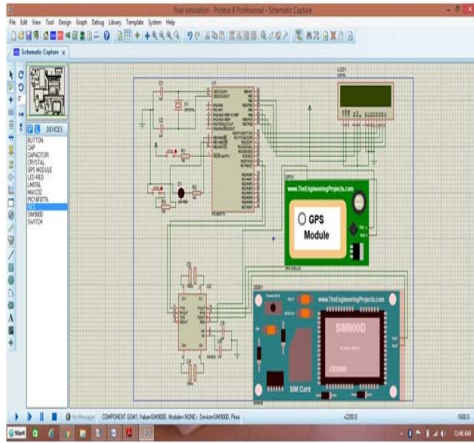


Fig. 1. Block Diagram

III. METHODOLOGY

Basically it will be a compact device which can be used like a wrist watch by girls or any common people.. As and when she does the thing, a container having the chilli powder will be sprayed on to the face of the culprit and simultaneously a pre recorded message will be sent(via GSM) to the near police control room regarding the situation along with the location (via GPS) of the place where she is facing the problem. A longer buzzer will be switched on So that the surrounding people can get the attention of that and come for help. The police soon after getting the message and area location can get the help for the Girl quickly.

Steps to achieve the Objective of the project during the project development.

- 1.The system will implementing by first designing the hardware and later the software.
- 2.Hardware design will begin by designing individual circuits and their testing.
- 3.After the confirmation of the proper operation of each circuitry, the Printed Circuit Board (PCB) will design.
- 4.PCBs are fabricating by the manual process using screen printing and chemical (FeCl) etching technique.
- 5.Software design will start after the hardware will fully fabricated and tested successfully. Programs will written in Micro C Pro for individual modules and tested independently.
6. After each module testing, integration of all software modules and trouble shooting and debugging will carried out.

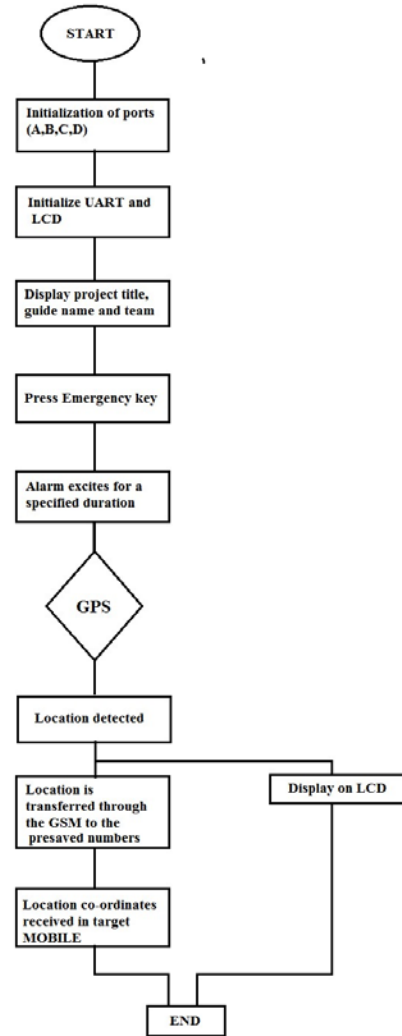


Fig. 2. Flowchart

IV. HARDWARE REQUIREMENT

Dual Band GSM MODEM (SIM 900): This GSM

Modem can accept any GSM network operator SIM card and act just like a mobile phone with its own unique phone number. It is a wireless MODEM and can send and receive data through the GSM network. It can also be used in GPRS mode to connect to the internet and use all the applications for data logging.

Gps Receiver: Global Positioning System (GPS) is a network of satellites that continuously transmit coded information, which makes it possible to precisely identify locations on earth by measuring distance from the satellites.

The purpose of using GPS module in the system is, it continuously transmits serial data like position of an individual wearing sensor, in terms of latitude and longitude, date, time and speed values to processing unit.

Lcd Display Unit: This system is used display the title messages and other messages while communicating with the system. A 2-line, 16 character type LCD display module is used. The microcontroller sends the signals to LCD module through its port pins.

V. SOFTWARE REQUIREMENT

A. PICKIT2

The pickit2 is a low-cost in-circuit debugger (ICD) and in-circuit serial programmer(ICSP). Pickit2 is intended to be used as an evaluation, debugging and programming aid In a laboratory environment.



Fig. 3. Pickit2 Development Board

B. MikroC PRO



Fig. 4. Mikro C pro Software

MikroC is a full-featured ANSI C compiler for 5 different microcontroller architectures. It is the best solution for developing code for your favourite microcontroller. It features intuitive IDE, powerful compiler with advanced SSA optimizations, lots of hardware and software libraries, and additional tools that will help you in your work. Each compiler comes with comprehensive Help file and lots of ready-to-use examples designed to get you started in no time. Compiler license includes free upgrades and a product lifetime tech support, so you can rely on our help while developing.

VI. XCTU SOFTWARE

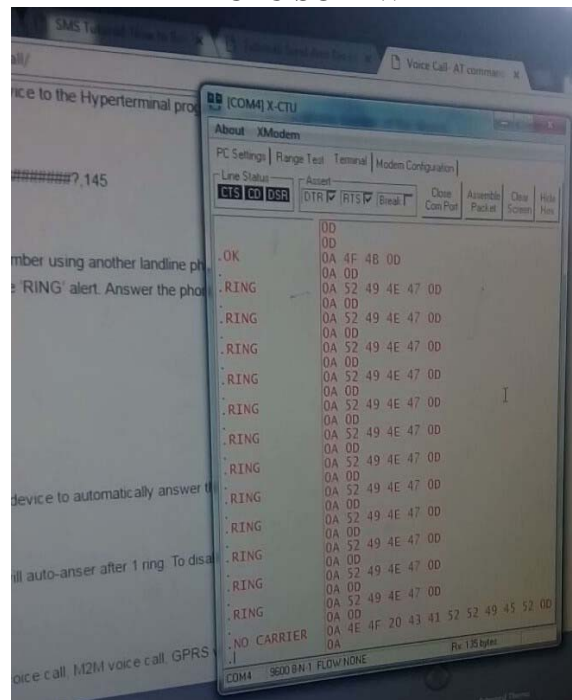


Fig. 5. GSM Testing Result

VII. ADVANTAGES

1. Safety Device which can be carried by everyone.
2. Ultra low power consumption.
3. Compact in size.
4. Wireless connectivity.
5. Easy and fast to install.
6. Easy Maintenance.
7. Low cost with high performance.

VIII. DISADVANTAGE

1. Network problem.

IX. FUTURE SCOPE

The concept can be used to provide the security for Physically Challenged Girls 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.

X. CONCLUSION

The key objective is to develop a low cost system which can store the data of the members in the particular locality and provide immediate alert in case of crime against women. 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.

XI. REFERENCE

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