



Safety Is In Your Hand

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ABSTRACT: Today in the current global scenario, the prime question in every girl's mind is mostly about her safety and security. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security.

I remind myself of the incident that happened in Delhi Nirbhaya case, *every time* I want to pinch the bridge of my nose and let out an exasperated sigh. Parents at home wander in home waiting for their child to return safely. This paper suggests a perspective to use technology to protect women and kids who have to step outside for their daily scheduled work. The best way to curtail your probability of becoming a dupe of violent crime (stalking, bullying, robbery, sexual assault, rape, domestic violence) is to recognize, defence and look up resources to help you out of hazardous situation. We propose to have a device which is the integration of multiple devices, hardware comprises of a wearable "Band" which resembles a watch due to which the attackers will not be alerted. This is a theoretical concept which if implemented can bring a good change in security system that are available today.

I. INTRODUCTION

This paper has considered various aspects of a situation where a girl can feel insecure in a lonely or helpless condition. It not only focuses on security conditions but also if the person is unable to get free from the situation, she can send important information to the security officers and relatives who can get to her easily. There are several such security alert systems designed previously but no one guarantees ease of getting the culprit.

Our device would be comfortable to wear, imperceptible due to its construction similar to a watch.

Now days photos can be compared online with the ID card databases and the details of the person can be achieved.



Fig1. Block Diagram

II. EXISTING SYSTEM FOR WOMEN SECURITY

A. SHE (Society Harnessing Equipment): It is a garment embedded with an electronic device. This garment has an electric circuit that can generate 3800kV which can help the victim to escape. In case of multiple attacks it can send around 80 electric shocks.

B.

C. ILA security: The co-founders of this system, have designed three personal alarms that can shock and disorient potential attackers and hence safeguard the victim from perilous situations.

D. AESHS (Advanced Electronics System for Human Safety) It is a device that helps track the location of the victim when attacked using GPS facility.

E. VithU app: This is an emergency app initiated by a popular Indian crime television series "Gumrah" aired on Channel [V]. When the power button of the Smartphone is pressed twice consecutively, it begins sending alert messages with a link of the location of the user every two minutes to the contacts.

E. Smart Belt: This system is designed with a portable device which resembles a normal belt. It consists of Arduino Board, screaming alarm and pressure sensors. When the threshold of the pressure sensor crosses, the device will be activated automatically. The screaming alarm unit will be activated and send sirens asking help



The main drawback of these applications and services is that the initial action has to be triggered by the victim which often in situation like these doesn't happen. So the emphasis is to build a solution that work autonomously in situations encountered.

III. PROPOSED MODEL:

In this device we can use PIC18F24K50. It has 16k bytes flash memory and 1024bytes RAM. Software, numbers and message for inform friends, family and neighbors are store in the spot of the PIC. the messages to the numbers stored (numbers of friends, family and neighbors) in the PIC controller, is an automatic call to a particular friend whose number is stored in the PIC controller and sending location of dupe to the nearby Police Station. The output of the microcontroller is transmitted wirelessly by using GSM module to the receiver's mobiles and server. For linking GSM module to the microcontroller, IC MAX 232 is used to interface the serial communication port RS232. This RS 232 is directly connected with the GSM module. For doing the automatic SMS operation it needs the help of the server. In the network side, there will be a GSM module to receive the signal coming from the device. The server has a data base in which lots of numbers were saved based on region. The incoming signal consists of GPS coordinate. By compare this with the database the server will find out the corresponding place and sent information (message and location) to those numbers saved along with that spot. These numbers consist of Police station numbers of that region and others in that region so that they can respond in the incident. The components used are:-

1. GPS

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 reciever for the GPS module. It can be interfaced with normal 5V Microcontrollers with the help of the in built 3V-5V converter. The interfacing is made easier with the help of low pin count (4 pin) strip. The 4 Pins are 5V, TX, RX, and GND. This standalone 5V GPS Module does not require external components .It consists of internal RTC Back up battery and can be directly connected to USART of the microcontroller. The current date, time, longitude, latitude, altitude, speed, and travel direction / heading among other data, are provided by the module and can be used in a many applications including navigation, fleet management, tracking systems, mapping and robotics. The module can support up to 51 channels. The GPS solution enables small form factor devices which deliver major advancements in GPS performances, accuracy, integration, computing power and flexibility. They are used to simplify the embedded system integration process.

2. GSM

GSM is used to send data from control unit to base unit .We can use GSM 300 which operates at frequency 900MHz. It has up link band of 890MHz to 915MHz and down link Band of 935MHz to 960 MHz GSM takes advantages of both FDMA & TDMA. In 25MHz BW, 124 carriers are generated with channel spacing of 200 KHz (FDMA). Each carrier is split into 8 time slots (TDMA). At any given instance of time 992 speech channels are made available in GSM 300.

3. **Camera:** There are 2 cameras that are activated for 10 minutes once activated.

4. **Solar chargeable.**

5. **Scanner:** A scanner that can take images of selected areas, person and vehicles used.

IV. SOFTWARE ALGORITHM

- a) Scan the contact number from PIC controller.
- b) Get data from GPS module.
- c) Convert the longitude and latitude obtained from GPS .
- e) Collect the images from camera and scanner.
- f) Send the co-ordinates to the selected emergency numbers.
- g) Send the co-ordinates and the scanned output to ICE numbers.

V. CONCLUSION

This idea can be very useful if it is brought to work for the security of women and kids. Now days kids are smart enough to work with camera and scanners. There is lot more to work on this project which can enhance the security implementations in the real world.



With further research and innovation, this project can be implemented in different areas of security and surveillance.

The system can perform the real time monitoring of desired area and detect the violence with a good accuracy.

VI. REFERENCES

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