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A SECURITY AND SURVEILLANCE SYSTEM FOR WOMEN SAFETY ON PREVENTING AND COMBATING VIOLENCE AGAINST WOMEN

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ABSTRACT

Women all over world are facing and even subjected to the unethical physical problems. Security for women is still a major issue as the number of crimes and harassment over women and girls is increasing day-by-day. In this age of technology,mobile phone is one of the gadgets that almost everyone like and keep in touch with family and friends.All the need is a device that can be carried everywhere easily.This proposed paper deals with a quick responding cost protection system for a individual and especially for women using which a woman in anguish can call for help just with the shack of a switch on this device.Self defence module for women safety is like a smart device foe women are embedded into a compact device has the protection.It has a control button that will be used by women to inform nearby police when they are in distress.This device directly gets connected to the satellite through GPS when activated.then the location is transferred through the GSM.

Key Words: *GPS, GSM, Smart device, voice recognition*

1.INTRODUCTION

India which seeks itself as a promising super power and an economic hub can achieve it's themselves involved and participate in the development process.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 fear of violence. Even in 21st century where the technology is rapidly growing and new gadgets were developed but still women and girls are facing problems. This paper presents an analysis review on the principle need of intelligence defence system with technology requirement and challenges to build the system.Since the prediction of such situation is not possible hence to minimize the act of physical violence is to keep all the help tools ready to safety risk and brings assistance when needed.The microcontroller act as an embedded computing system and its controls the activity of all subsystems. The microcontroller is with all the other modules of the device. The program for microcontroller is done in embedded c language and is dumped using a kit.

2.EXISTING SYSTEM

GPS and GSM based vehicle tracking system is currently used.This system consists of GPS module attached to a button in the vehicle.In case of emergency, the switch attached to the GPS can be pressed.the GPS that is used here is Teltonika.when any problem occurs the employee travelling in the vehicle presses the switch attached to the GPS. GSM module attached to this GPS and switch is used to send the message to a special team of the organization. Although this system seems to be efficient,at times there this system drawbacks because the drivers may not be trust worthy.

Another existing method is a application based prototype.it is interfaced with GPS, GSM and a spy camera. The user must register the emergency number this is a android app which provides all facilities but it has a disadvantage that if the mobile phone of the victim is thrown away by the opposing person, this model cannot be used efficiently. To overcome these disadvantages we propose a model.

3.METHODOLOGY

The system comprises a sections which describes quick responding,cost production system for an individual and especially for women using which women in distress can call for help just with the shack the switch on this smart device.self defence system for women safety is like a smart device for women.it has the ability to help the technologies that are embedded into a compact device.the women wearing this device,in case of any harassment or when she finds that someone is going to harass,the system allows for knowing exact location of a individual,as soon as trigger key on the belt is shaked.by providing the instant location the distressed victim to the police so that the incident could be prevented and the culprit apprehended.in case if the caretaker wands to know the present location of the lady.she can do so by sending SMS and call to the SIM number for the lady which contains a secret password. Then this system responds to such request by sending back a SMS containing location information in terms of latitude and longitude.this would help reduce crime against women.

4. PROPOSED MODEL

- Microcontroller
- GSM modem
- GPS modem
- Gyroscope sensor
- Shake switch
- Audio/video streaming
- Power supply,TV,computer police station

4.1.Microcontroller:

The high performance Atmel 8bit AVR RISC-based microcontroller combines 32KB ISP flash memory with read,while-write capabilities 1KB EEPROM,2KB SRAM,23 general purpose I/O lines,32 general purpose working registers,three flexible timer/counters with compare modes, internal and external interrupt,serial

programmable USART,a byte-oriented 2-wire serial interface,SPI serial port,6-channel 10-bit A/P converter,programmable watchdog timer with internal oscillator and five software select able power saving modes.the device operates between1.8-5.5volts.

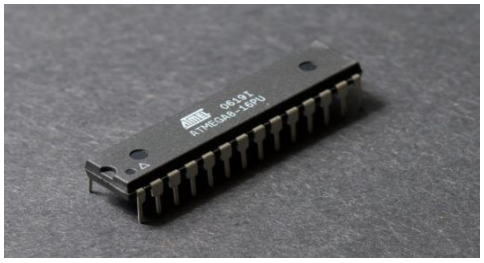

Fig 1 : Atmega 328

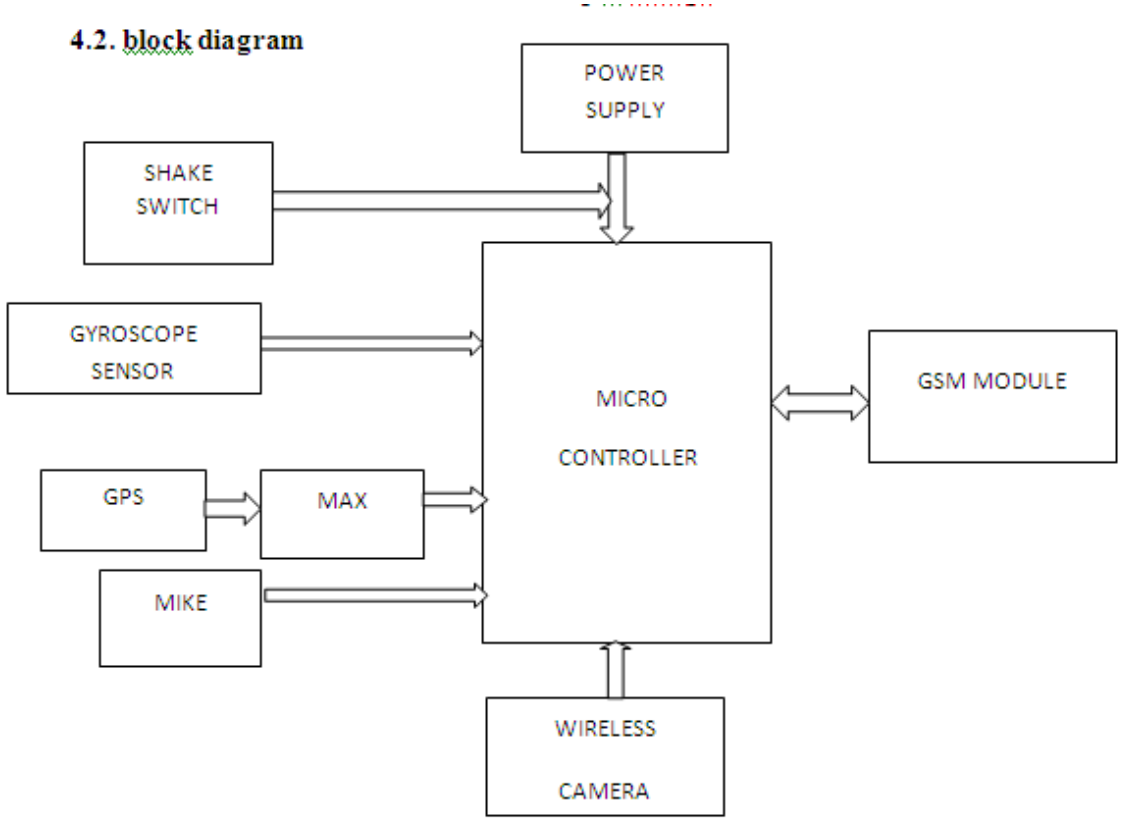

Fig 2: Block Diagram of Self Defense module

4.3. SOS Key Press Module and Voice Reorganization Module:-

Any one action can be activates the system,which sends the message including the user location to the registers contacts. At the receiver, just by clicking on the location ink provided in the message it can show the location on the Google map.Any one action can be activates the system, which sends the message including the user location to the registered contacts.At the receiver, just by clicking on the location ink provided in the message it can show the location on the Google map.

Fig 3: Voice Recognition Module.

4.4.GPS module:

It is a navigation and precise positioning tool,tracks the location in the form of longitude and latitude 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.

FIG 4: GPS receiver.

4.5. GSM module:

Global System for Mobile communication (GSM) SIM card is inserted inside the mobile device to send and receive the messages 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 incorporate many other custom applications, machine automation and machine to machine communication.

Fig 5: GSM Module

5. WORKING OF PROTOTYPE DEVELOPED

The working of the proposed model can be dealt in steps as shown below

Step 1: When the woman is in distress situation,she can press the emergency key which activates the self defense module.

Step2: The current location is captured by the GPS module and will be displayed on the LCD DISPLAY which is as shown below

FIG 6: Initial Location Identified

This diagram shows us the location of the particular person whom we want to track. This is done with the help of GPS.

Step 3: Through GSM the emergency message is sent to the near by police station, and also to relatives, friends by using the contact numbers which are stored in the GSM.

Step 4: Now the input data that is the voice of the person is stored. Then the data is transferred to the nearby police station. With the help of GPS and GSM the location of nearby police station is found out. The system is implemented with a Sim card which also helps to transfer the information.

Step 5: The module has another emergency key for shock generator which when pressed the module is activated and produces non lethal shock to deter the attackers.

6. FUTURE SCOPE

As the technological changes or new requirement from user to enhance the functionality of product may requires new version to introduce. Although the System is complete and working efficiently, new modules which enhance the system functionality can be added without any major changes to the entire system. By keeping this ability of the product 1 mind, an incremental process model has been used to design and develop the system. These are as follows

1.Primary School Children Safety: As the school children safety are major concerns for parents as well as school management due to the recent incidents of child crimes like children missing, abuse etc. This module monitors the child safety when they are travelling in school buses. Once they reached the school the device gets deactivated by school authority and message send the parents that, ―the child reaches the school safely. At return journey again the device is activated by school authority and when they reached the home, the acknowledge message is send to the school when parents deactivate the device. The device is capable of audio recording when activated that can be listening by the parents or authorize person.

2. Vehicle Safety System Module: The Safety of four wheeler car is also a major concern in the society due to the increase in the crime rate of stolen car. The intrusion detection module can be modified according to the requirement of vehicle safety system module

. **3. Mobile and other valuables Safety System Module**:

The missing rate of mobiles is high while travelling from bus, train or crowed public area. The area zone module functionality further enhances to provide safety. A small device needed to keep either in same pocket or within the range of few centimeters. As you kept the mobile and forget to pick up or someone stolen it then de to small range the siren of mobile as well as device gets ON for user attention. Also the same device can attach to our luggage, hence in case of forgetting to pick back or try to stolen by someone can be easily noticed by the module and make the attention of user through the siren alarm. Hence, the advance technology makes the system more robust and reliable. As the new modules provide the functionality which enhance the safety and security. Thus it helps to fulfill the purpose of the project.

Finally, the system will be implemented in a real scenario in order to test its actual performance.

7. CONCLUSION

It can be concluded that the system helps to supports the gender equality by providing safe environment to women in the society, and allows them to work till late nights. Anyone before doing any crime against the women will be deterred and it help reducing the crime rate against the women. The Guardian system pursuits a revolutionary concept: the total supervision of people under risk situations, augmenting their safety and autonomy in a completely ubiquitous way. It is important to mention that there is no similar solution in the market. This fact implies a high level of hardware development. The creation of a hardware and software prototype has achieved two objectives: validation of the proposed architecture and checking whether the utilized technology is Appropriate for the system. Women's security is a critical and social issue in today's world. The crime (molestations, robbery, sexual assault, rape, domestic violence) against the women can be now brought to an end with the help of real system implementation of propose model.

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