

Communication Protocol for The Guardian System Aimed At The Protection Of Mistreated Person

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ABSTRACT

Thousands of people (mainly women) are daily mistreated, battered and abused by their ex-couples or their current couples. In this sense, electronic surveillance can be an efficient tool for helping to guarantee the safety of victims. Ambient Intelligence (AmI), based on ubiquitous computing, represents a promising approach to make technology adapt to people in order to solve the challenge of developing strategies that allow the early detection and prevention of problems in safety environments and, more specifically, the protection of people under risk situations, including cases of mistreatment or loss. This paper describes Guardian, an integral solution designed for improving the protection of mistreated and at-risk people by means of the integration of GPS, GPRS and ZigBee technologies. The basic architecture of the system, the proposed wireless devices, as well as the communication protocol used between the system and the devices are described. Furthermore, a first hardware and software prototype is depicted and tested.

1. INTRODUCTION

According to the National Crime records Bureau, the total number of rape cases in India was a staggering 228,650 and Delhi, the national capital accounted for 5234 of those and in 2011 according to Ministry of Home Affairs, a total of 24193 cases were reported. This is just the tip of the iceberg. Rape is a notoriously under-reported crime, thanks to its social stigma. A woman is raped every 21 minutes in India and every 18 hrs in Delhi. Its shameful for the whole world.

The primary reasons behind such shocking statistics is the society which is prejudiced against the girl child, lack of proper policing, ineffective laws etc. While the long term solutions should aim to correct the above factors. Now there is requirement of some change.

By observing such bad conditions of women in the world, we the team "Dream Team" came up with "Smart Watch For Women". This "Smart Watch For Women" has the potential to help women by the technologies that are embedded in it. "Smart Watch for Women" provide watch and this watch is specially designed for women safety. It has a button that will be used by women to inform nearby police when they feel danger. This watch directly gets connected to the satellite through GPS when activated. Then the location is transferred through the GSM and this watch is also provided with a system that produces 60 shockwaves in 1 second in emergency situations.

2. LITERATURE SURVEY

1. SMART SECURITY SOLUTION FOR WOMEN BASED ON INTERNET OF THINGS (IOT)

PUBLISHED IN: IEEE EXPLORER

This paper explains The application is programmed and loaded with all the required data which includes Human behavior and reactions to different situations like anger, fear and anxiety. This generates a signal which is transmitted to the smart phone.

2. ONE TOUCH ALARM SYSTEM FOR WOMEN'S SAFETY USING GSM

PUBLISHED IN : IJECE

You sense danger, all you had to do, is hold on the button of the device. The device consists of a PIC microcontroller, GSM module, GPS modules. The system resembles a normal watch which when activated, tracks the place of the women using GPS Observation: Anytime (Global Positioning System) and sends emergency messages using GSM (Global System for Mobile communication), to sos contacts and the police control room.

3. PROTOTYPE OF AN INTELLIGENT SYSTEM BASED ON RFID AND GPS TECHNOLOGIES FOR WOMEN SAFETY

PUBLISHED IN : IEEE XPLOER

In this paper, developed women safety system using Radio Frequency Identification (RFID) and Global positioning system(GPS).The main idea here is using a active RFID tag with passive RFID reader to scan the information and this information is transferred to the mc.

2.1 EXISTING SYSTEM METHODOLOGY DRAWBACKS

- In all the above papers use of a smartphone which leads to two major problems:
 - Battery low problem.
 - Signal problem.
 - A poor man cannot afford a smartphone.
- Use of RFID leads to two major disadvantages
 - RFID is less reliable.
 - RFID is often more expensive.
 - RFID technology is hard to understand.

3. PROPOSED SYSTEM

3.1 METHODOLOGY

The project mainly consists of the set of hardware as shown above. Basically it will be a compact device which can be used like a wrist watch by girls or any common people. when the Victim does the thing, a shock will be generated 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 Victim 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 victim quickly.

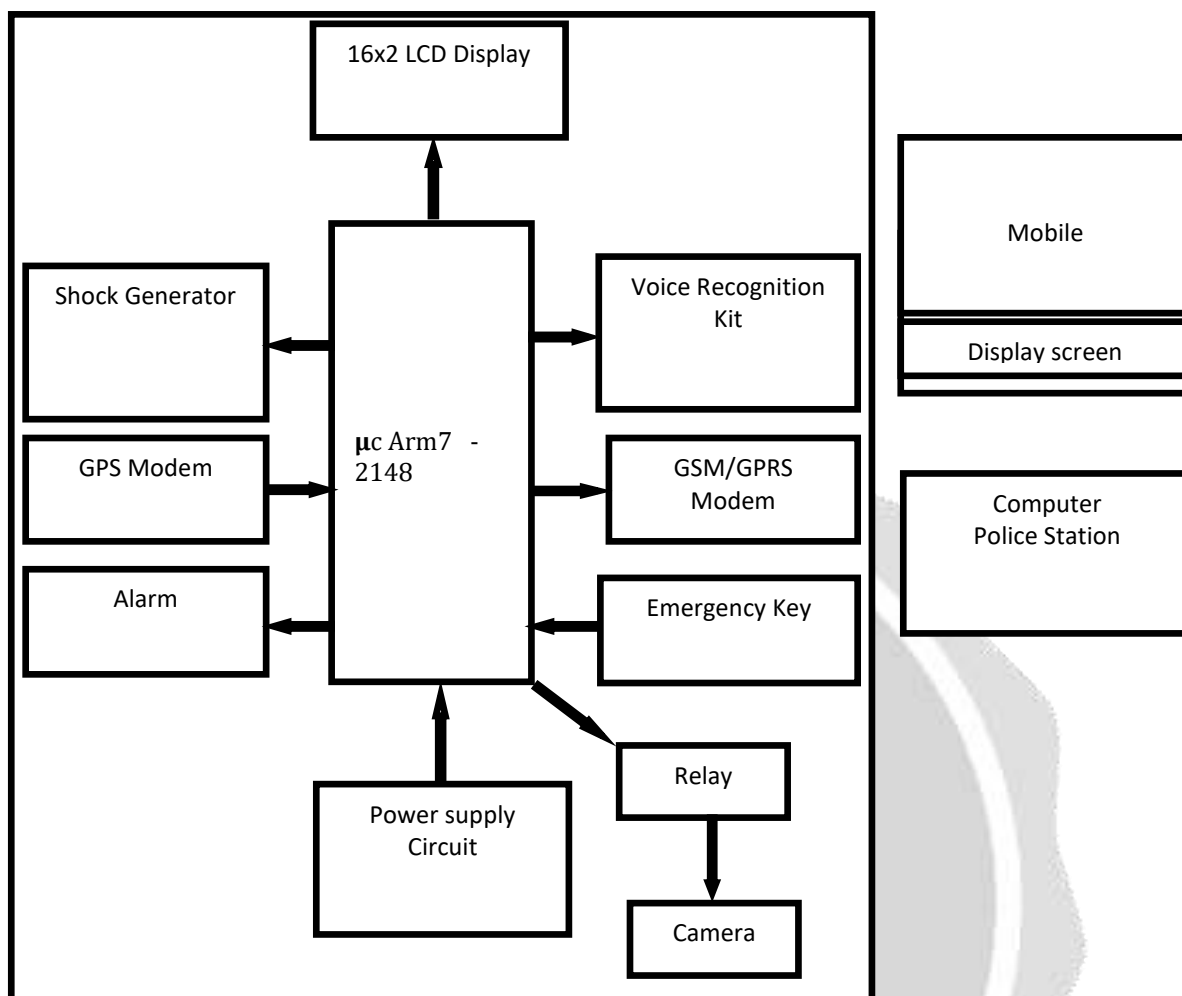


Fig-1: Block Diagram

3.2 PROPOSED SYSTEM EXPLANATION

- In this project we make use of voice recognition kit to detect voice of person in emergency situation.
- For instance if a person finds himself in any threat the voice recognizing device will detect the predefined voice already recorded in the system.
- The predefined voice commands can be like SAVE ME, HELP (this will already be stored in the memory).
- So whenever it detects the commands from the person under threat it will generate a loud noised ALARM (to initiate the situation to the public) and also activating the whole system.
- When whole system is active it will switch on the shock generator and later when victim presses the emergency key the system will take the GPS location and location will be sent to the family and nearby police station through GSM
- If the family, or the police station wants the current location they can send SMS as TRACK and it will send the exact location .

4. CONCLUSION

In the last few years crime has taken its toe and measures taken to avoid this is not enough since any individual safety lies in his own bare hands firstly, later comes the society around us. Lot of work is to be done as far as humans safety is concerned as there are lot of criminal issues which is growing day by day. the above work is an exact methodology which can be followed to decrease the crime rate and for safety and self-defence of an individual since inclusion of self defence will raise a sense of horror in any individual who attempts to do any such sin. Therefore lot of work can also be done in this field which is a major issue in todays world.

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