

IOT Based Alert System

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ABSTRACT :

This paper presents the design and construction of a panic button alarm system for security emergencies which is used for real time monitoring of security emergencies such as theft, threat to life and property. The main objective of this project is to provide real time monitoring of different security emergency events and to provide location of distressed individuals through GPS mapping system using Google map. This project is achieved using Arduino Uno microcontroller which acts as the brain of the system where all instructions are carried out, GSM module which gives SMS access to the microcontroller and the security control centre, GPS module which gives location of push button when triggered by an individual in a threatening situation. This design saves time to contact security in times of security emergencies and can be deployed in rural areas where access to security is limited.

INTRODUCTION

A well-coordinated security system gives security personnel timely alert for action to be taken to save life and property from destruction. Security systems should be built and placed at strategic locations which should be connected to a central security control centre where the location of a triggered push button is displayed on a google map screen using GPS monitoring system. The security system built can be deployed in rural areas where we have less security personnel. This system is utilized as a low cost security system which is installed in various locations ranging from market places, stalls, supermarkets, street corners. This paper presents a panic button alarm system for security emergencies, the system is basically made up of an Arduino Uno microcontroller, a

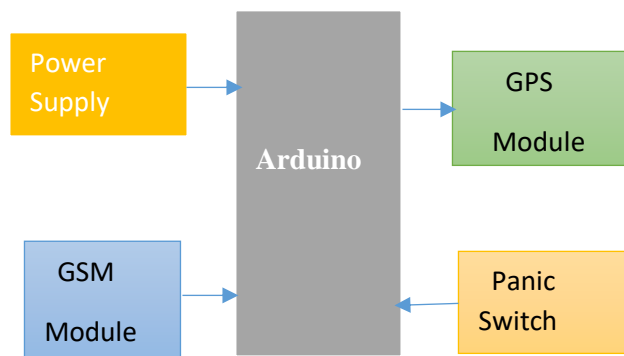
GSM module and a GPS module. The system development, analysis and discussions are also presented in this paper.

METHODOLOGY:

The development of the system starts from the design stage of the system where instructions are programmed in a sequential manner. The system starts from the ON state to the activation state to the state where readings are taken from the GPS module to the state where location is sent by the Arduino through the GSM module. This is shown in a flow chart in figure 1 below. The methodology is summarized as follows:

- Design of a panic button alarm system
- Construction of the model
- Prototype testing
- Validation

BLOCK DIAGRAM:



CONCLUSION:

This prototype was constructed and worked well. The system was powered to an ON state and the push button was triggered. The location of the triggered push button was displayed on the laptop screen which acted as our control centre. This paper solves the problem of delay in contacting security when there are security emergencies. The GPS module sends location of the triggered push button while the GSM module acts as a wireless communication link.

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