

Building Monitoring System Using Android

A. Nandhini, S. G. Sandhya

Department of Computer science and Engineering, IFET College of Engineering, Villupuram, Tamil Nadu, India

ABSTRACT

Now-a-days more destruction occurs in electrical things like leakage of gas and fire. It can affect the surrounding area. The proposed system is to measure fire detection and alarm plays an important role to monitor the environment. The main purpose of the system is to prevent the surrounding. It can be overcome by building monitoring system using android application. The entire project will be controlled by using microcontroller and android mobile. The microcontroller is programmed using C-Programming and the Android application is developed in Blue term.

Keywords: Mobile, Sensor, Microcontroller, Motor.

I. INTRODUCTION

The proposed system is to measure a fire on a building after the alarm will play automatically to set up and create an application. Fire detection and alarm play an important role to monitor the environment. The main purpose of the system is to prevent the surroundings. Mostly the fire alarm system and detection are used in industries, hospitals, educational etc., .Three main systems are used in this project, 1) The detection system, 2) The monitoring system and 3) The appliance (Fire Control System) system. The detection system intimates the fire. This detection system has components like flame detector, gas detector and Human detector. The detectors are placed in parallel in different levels. Any signal from each detector at any level is monitored using monitoring system. The appliance system has workings like buzzer for alarming and motor pump to stop the fire. The entire system is forbidden by microcontroller android application. The microcontroller is programmed by using C-Programming and Android application was developed in Blue term tool.

II. METHODS AND MATERIAL

1. Existing and Proposed System

a. Existing System

In the Existing system the Web Services were rising as a popular middleware technology used to integrate heterogeneous building automation system on Internet. Android Technology with web services has gained popularity recently in the mobile Application market. The aim of the project is remote access of acknowledgment those using android application.

b. Proposed System

Fire detection and alarm plays an important role to monitor the environment. The main purpose of the system is to prevent the surroundings. Mostly the fire alarm system and detection are used in industries, hospitals, educational etc., The detection system intimates the fire. This detection system has components like flame detector, gas detector and person detector. The machine system has apparatus like buzzer for alarming and motor pump to discontinue the fire. The entire system is controlled by microcontroller and android application.

2. Hardware

The Kit contains Micro Controller, Universal Asynchronous Receiver and Transmitter (UART), Liquid Crystal Display

(LCD), Sensor Network, DC motor and android mobile. The sensor will sense separately the temperature, human, gas etc. After that it will be sent to android phone. The LCD will set up on a 0 or 1 if the detection occurs the result is 1 otherwise it will be zero. Suppose if the result is 1, fire will be detected so automatically relay switch is turned on and the motor will stop the fire. Three main systems are used in this project. 1) The detection system, 2) the monitoring system, 3) the appliance (Fire Control System) system. The entire project will be controlled by microcontroller.

3. Block Diagram

a) Transmitter Section:

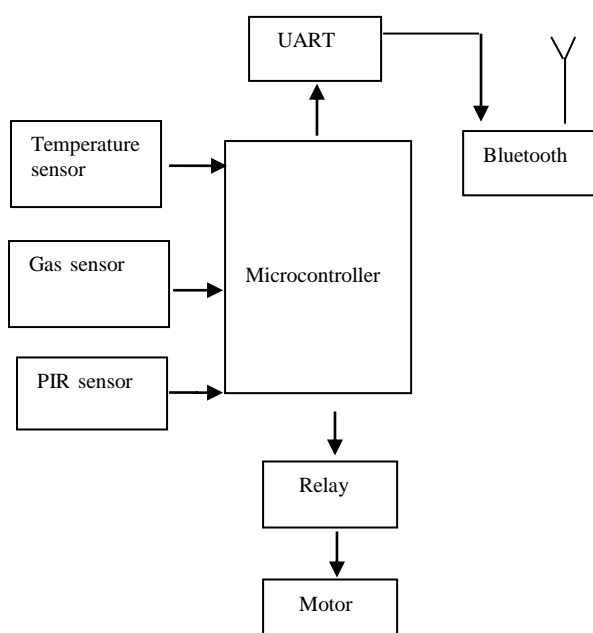


Figure 1. Transmitter section

b) Receiver Section:

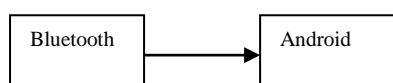


Figure 2. Receiver Section

4. Software

User application is the inbuilt application which is paired into the sensor network to block the android application. The software coding is done using a Embedded C and Kiel C software process. The android application was developed by Blue Term tool.



Figure 3. Smart Phone

5. Working Principle

In the proposed work if any destruction occurs in a building it can be sensed and the result can be found out. The detecting process is done using a microcontroller. The sensor will monitor the process. The LCD will display whatever happens in the microcontroller. Afterwards the UART (universal asynchronous receiver transmitter) will send a message to the android phone. The LCD will set up on a 0 or 1. If the detection occurs the result is 1 otherwise it will be zero. Suppose if the result will be 1 there fire will be occurred so automatically relay switch can be turn on and the motor will stop the fire.

III. RESULTS AND DISCUSSION

A. SAMPLE KIT



B. MODULES

Three main systems are used in this project.

1) Detection system:

The detection system intimates the fire. The detection systems are used to detect the components like flame detector, gas detector and Human. The detectors are placed in parallel in different levels. The flame detector is used to sense the flames, gas, person.

2) Monitoring system:

The monitoring system continuously monitors the sensors and the information will be displayed on a LCD.

3) Appliance (Fire Control System) system:

The machine system has apparatus like buzzer for alarming and motor pump to stop the fire. This is to create an alarm and stop the destruction.

IV.CONCLUSION

Fire detection and alarm plays an important role to monitor the environment. This process will be following a building monitoring system using android application. The entire system is controlled by microcontroller and android application thus creating an awareness and to overcome the accidents occurring.

V. REFERENCES

- [1]. Naji HR Amnion M. A .el al, Hospital Health Care Monitoring System using Wireless Sensors Network, 2012
- [2]. Yedu Manmadhan Anand V. R. M. J. Jayashree Sherin Sebastian, Neethu Rachel Jacob el al Year: 2010, Remote Patient Monitoring System
- [3]. Kenny T.H. Chieng Dr. Lee JerVui, Chuah Yea-Dat el Year: 2010., Smart Elderly Home Monitoring System with an Android Phone
- [4]. Hyduke Noshadi Majid Sarrafzadeh William Kaiser Jonathan Woodbridge, Ani Nahapetian Year: 2008., Wireless Health and the Smart Phone Conundrum
- [5]. Suhas Ranganath-Mahesh K. Banavar Photini Spanias Deepta Rajan, Andreas Spanias el Year: 2008., Health Monitoring Laboratories by Interfacing Physiological Sensors to Mobile Android Devices