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Review on Fire Detection System with SMS/CALL Alert Safety Using Microcontroller

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ABSTRACT: The outbreak of fire is a major tragedy that must be avoided by INTRO due to possible loss of life and potential damage to Som property, without control the fire can escalate and cause an accident to be brought under control. When a fire is detected, an electric alarm is turned on and a short messaging service (SMS) alert is sent to the owner. After ten to fifteen seconds. The system, and most owners, and the National Fire Service (NFS) are re-sending SMS with security officials at the exact location. Call alerts are sent to facility owners and firefighters, respectively, in case of disaster if system is not reset. The microcontroller often acts as the command center of an efficient, intelligent fire protection system. Circuits are designed and simulated using Proteus electrical software, and many of the configurator software's mobile communications (GSM) SMS controllers are programmed using global systems for alarm concerns. Prototypes were created and threats were investigated in real-time. The proposed system is cost effective and will help advanced tea policy makers and save lives and property when it is destroyed. When the system detects a domestic temperature of 55 C. It will display instant alert notifications on the LCD display and at the same time send SMS alerts to the users when the temperature rises in the house. Test results are signed and discussed. To quickly improve through this system, their users can help security standards. This allows end users to protect their lives and property as well as disaster.

KEYWORDS: Fire Detection System. GSM

I.INTRODUCTION

Some commonly known causes of fires and accidents in developing countries such as Ghana are faulty electrical cables, gas leaks and human error Of the many disasters, fire has been the most frequent, devastating and most effective. Due to the rapid development of urban construction, the possibility of fires and other special disasters are also increasing year by year. Home rental fires are often caused by a number of common factors, such as cooking utensils, in-house smoke, electrical appliances, candles, curious children, faulty wiring, and more. As human technology advances, fire safety concerns have increased rapidly and fire hazards have become one of the main consequences of advanced technology and have resulted in the loss of many lives, as well as the destruction of countless home properties and equipment and the industrial environment.

II.SYSTEM MODEL AND ASSUMPTIONS

The system works as expected and the sensors produce repeatable output, i.e., the same output every time there is an environmental trigger in the model house, i.e. hot temperature and smoke pollution. When any sensor reading goes beyond the normal range, the GSM module, brought online, allows the network to be retrieved and a message is sent indicating which sensor it is. This makes the user more aware of the environmental parameters in his residence or office. If the combination of readings meets the default fire criteria, an alert message is sent to the server. All hardware tests confirm hardware errors. It then proceeds to shut down GSM modnie for proper energy management. After that, the sensors start reading and averaging their readings to eliminate errors and avoid false alarms.

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Block diagram :

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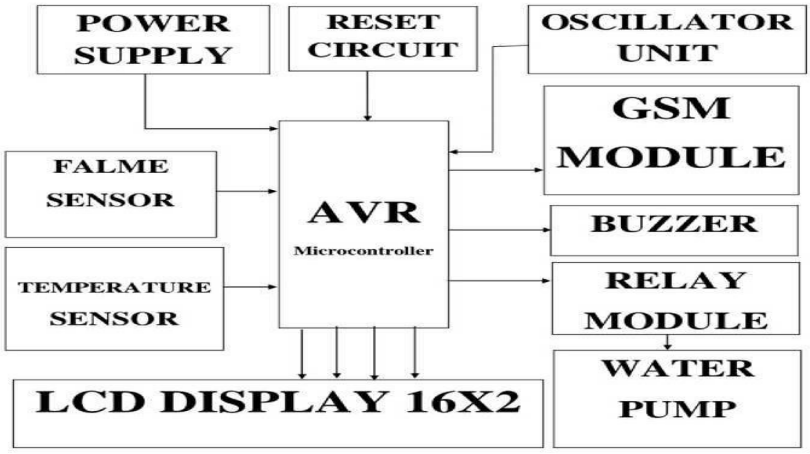

Fig1.1 Block diagram

III.RESULT

This system provides advance protection for Fire Detection System with SMS/CALL Alert Safety Using Microcontroller with remote application.

IV.CONCLUSION

The ability to detect heat or high temperatures is undeniable due to the use of LM35 in the system. This tool can be applied in different areas due to its flexibility and simplicity of handling; For example houses, hostels, hotel industry, factories. The automotive industry and many areas that deal with crowds, people or things of interestIt uses a familiar technology and takes advantage of SMS capabilities to effectively achieve its proposed objectives. The operation of this system will save costs, provide reliable service and alert the nearest fire department, which will reduce (or even eliminate) loss of life and property.

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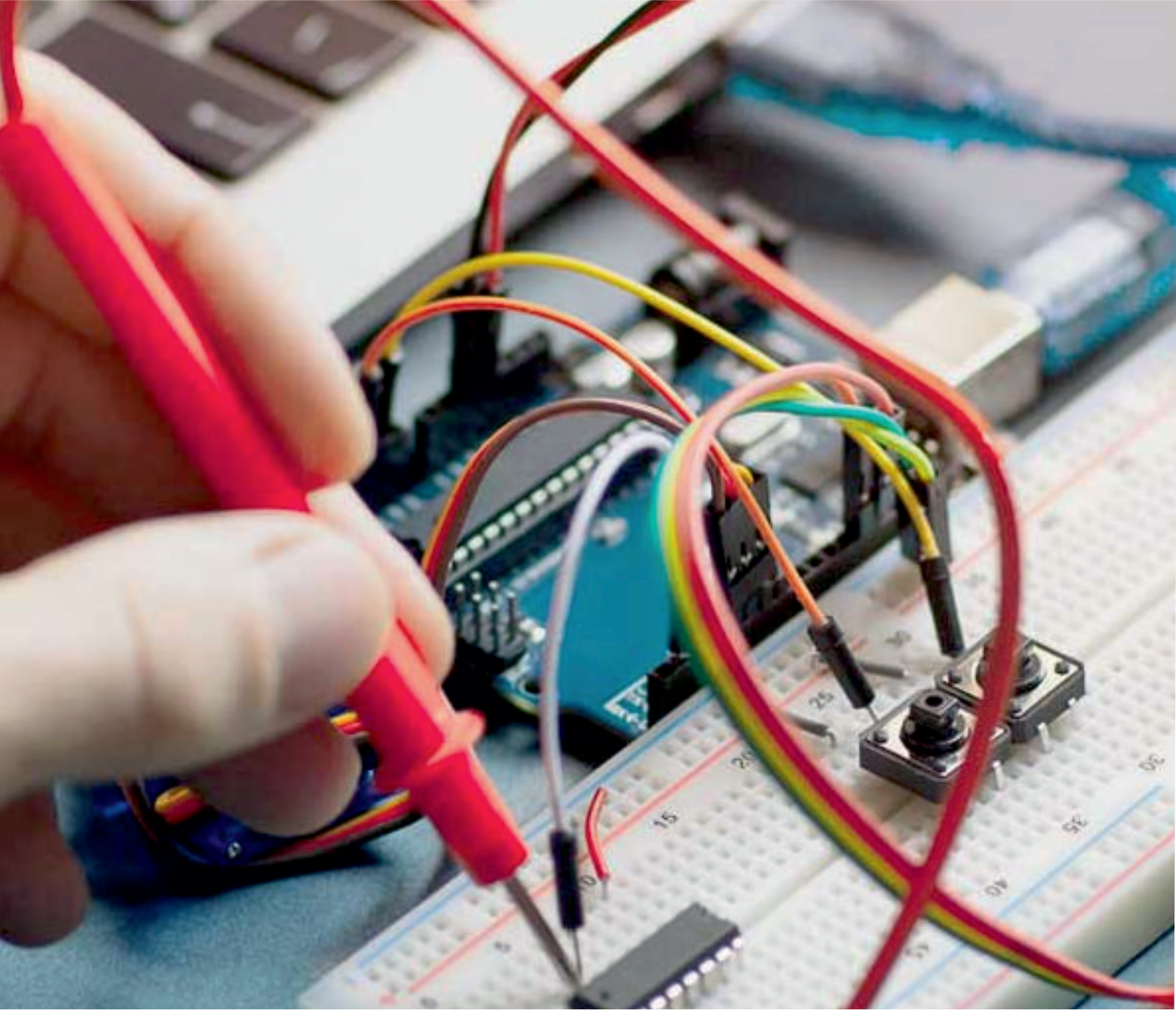

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