SMART SENSORS INTERPRETER AND ACQUISITION DEVICE WITH NOTIFICATION SYSTEM USING GSM TECHNOLOGY

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ABSTRACT

This project describes the modeling of a system to interpret and log data from temperature and light sensor. Using LM35 as the sensor to sense heat or ambient temperature, the data gain by LM35 will be sent to Arduino Microcontroller thus translating it into a number which are easier to comprehend. Electrical signal data received from sensor will be transformed to a value of numbers in degree Celsius correspond to the surrounding ambient temperature in real time. The intensity of light is measured by light dependent resistor, also known as LDR. Different intensity of light shine on LDR, will manipulate the resistivity of LDR thus providing different electrical signal fed to the microcontroller. Data will be processed and displayed in percentage of light (%) that will vary from 0 to 100 according to the intensity. Red and green LED will be used to symbolize state of temperature for the device. Built in buzzer is used to notify the user that the device had reach a temperature that might damages it. The device will call and send a short message to the specific user using built in GSM technology, when it is experiencing temperature above 36 Celsius.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Temperature or heat sensors are devices that measure degree of temperature of a specific medium. They are applied in almost every device. Mostly are found in houses, universities and even in our public transportation. They are even in planes, trains and boats. It is also applied in our everyday electronic appliances such as fridge, oven, and computers [3]. Temperature sensor consists of two main type, contact temperature sensor and noncontact temperature sensor.

Contact sensors work by measuring temperature of the medium in contact with the sensors. The sensors assume that both medium had an equal thermal level. Example of contact sensors are Thermocouples, Resistance Temperature Detectors (RTDs), Full System Thermometers and Bimetallic Thermometers.