

FIRE MONITORING SYSTEM FOR FIRE DETECTION USING ZIGBEE AND GPRS SYSTEM

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Wireless Sensor Networks (WSN) is best suited for applications where continuous and long term data acquisition is required. Forest fire monitoring is one of such application where continuous monitoring of temperature and humidity is essential to detect the wildfire. Monitoring forest for wildfire detection is very much necessary to protect environment and to conserve forest wealth and habitats of biodiversity and livelihood of human.

This project presents an algorithm to detect the wildfire based on the changes occurring in humidity and temperature during fire and presents methodology based on ZigBee and GPRS wireless sensor network which provides low cost solution with long life time, low maintenance and good quality service as compared to the traditional method of wildfire detection. The hardware circuitry of proposed solution is based on Arduino board with ATmega328 microcontroller, temperature sensor and humidity sensor along with ZigBee and GPRS modules.