Abstract

In present scenario, there is no mechanism to find where and when irrigation is needed, to find amount of fertilizers are needed for the crop as well as to find crop’s choice. In this project, a wireless sensor network is built by deploying various sensors as network nodes to monitor various factors such as temperature, humidity, pH levels and water levels. Temperature and humidity factors help to know the weather condition, if there is chance of rainfall. The water level sensor is deployed to know the water levels continuously such that water logging in field can be avoided. The pH sensors are deployed to calculate soil pH level this factor indicates the relative acidity or alkalinity of soil, because the crop choice dependent upon many factors of which suitability of soil is but one. The PIR sensor is deployed to find suspected persons or animals when they enter into the paddy field. All the data from various sensors will be sent wirelessly to the central sever using Zigbee technology such that the sensor network is monitored by a person in front of server computer by analysing the data also the personal computer will send GSM short message to absent manager’s mobile phone by using GSM technology and AT commands. This mechanism minimizes water loggings in the field and this mechanism conserves water and minimise the power consumptions in the paddy field because when ever water level falls below set point automatically the motor in field will be ON here the motor is controlled automatically with the help of ARM7 microcontroller and Zigbee.
technology and this mechanism avoids using of over fertilizers.

References

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Index Terms

Computer Science

Wireless

Keywords

Zigbee- IEEE 802. 15. 4 Wireless Sensor Network soil moisture humidity temperature
water level
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