

Wireless Sensor Monitoring System

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Abstract - In today's demanding and competitive business environment, the need to collect, interpret and act on real-time data plays an increasingly vital role. But data collection using typical wired sensor networks has always been expensive to install and maintain, and limited in its reach. This difficulty can be overcome by using tiny, wireless smart sensors. This Wireless System is a monitoring device that combines a maser controller, one or more sensors, and a radio for transmitting and receiving information. A typical application scenario is scattering a hundred of sensors around a green house or a building or around a hospital to monitor temperature or humidity, track patient movements, or inform of disasters, such as earthquakes. In the military, they can perform as a remote sensor chip to track enemy movements, detect poisonous gas or radioactivity.

Keywords - Wireless sensor node, Greenhouse automation

I. INTRODUCTION

In the traditional system in the different green house plant it is found that the systems are not fully automated. In these systems the indicating of the different parameters are on the analog scale. Again the impotent parameter that must be considered is in the plant it is needed that for the particular plant the requirement of the water must be at the appropriate level for that yet the water management system is manual one due to which it may happen that less or more water.

Again it is necessary that the spraying of medicine should at the equal extend. But still the spraying of the medicine is by manual only. Also it found that workers can't easily check the status of the different fans which are used for the controlling the atmospheric conditions.

To do all the necessary work manually the large man power is necessary. Due to this the mistakes while doing the management may be happen which indirectly affect the quality of the product. Again problem will be arise when it is needed that to supply the water at the night time.

So it becomes clear that the traditional system is suffered from so many drawbacks.

II. WIRELESS SENSOR MONITORING SYSTEM

A. Problem Statement

The present work aims at developing a software framework for sensing different sensor parameters. Processing them

and send them wirelessly to the monitoring system. Also take the necessary control action.

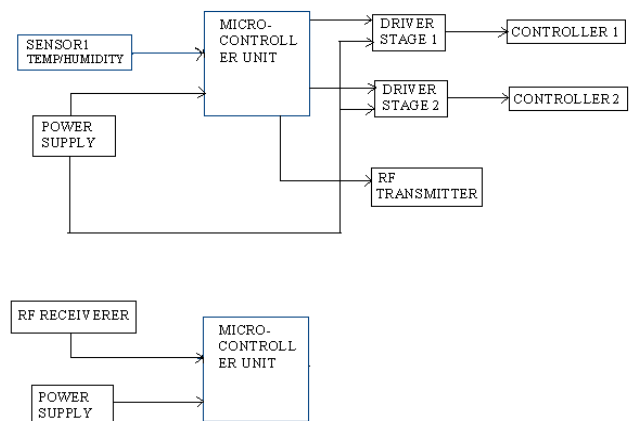


Fig. 1 Block Diagram of Wireless Sensor Monitoring System

B. Objectives

The proposed project work is based on the below objectives

1. Development of software framework for sensing, displaying, transmitting and receiving different sensor parameters.
2. Development of application using above framework.
3. Validation of the application.

C. Scope

The scope of the project is as follow:

1. The scope of the project is limited to development of software framework only.
2. The entire framework is developed using Keil compiler.

D. SY-HS-220

Calculation of percentage relative Humidity:

Calculations:

We have used 12 bit adc and our reference voltage is 5v. 5V corresponds to 4095 counts.

2.97 corresponds to how many counts?

Ans=2433

2433 count corresponds to 90 %Humidity

Humidity=0.03699*Counts

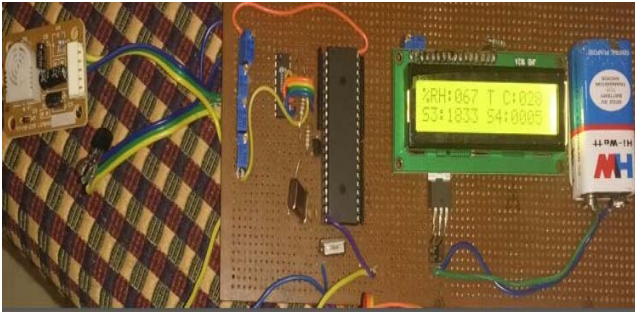


Fig. 3 Snapshot of Transmitter Section

RECEIVER SECTION:

At receiver section we are getting the results.

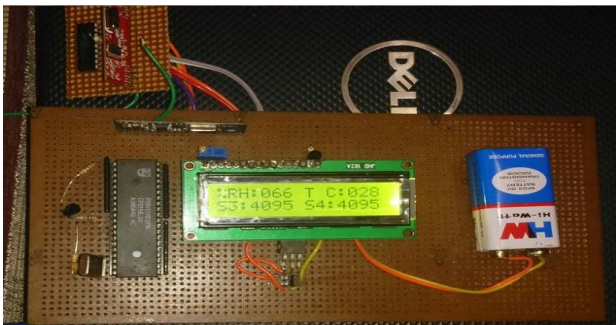


Fig. 4 Snapshot of Receiver Section

CONCLUSION

In this phase we have studied Design and Implementation of sensors in hardware. We have calibrated Humidity and temperature sensors according to characteristic curve. Also tested software and hardware parts got all the results as expected.

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