The Optimal Power Management System for Chinthalapudi Engineering College using Neural Algorithmic Techniques with Embedded System Approach

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Abstract - **The well known fact of today is power crises. The generation of power for required level is tough most tasks. Mostly, most of the power generation is from hydral power. Due to climatic conditions rain fall is drastically reduced. So power generation from hydral plants is also reduced and coming to the point of non-renewable sources those also reduced day by day. So here our concentration is optimized power utilization is first criteria. So we will concentrate in how to reduce power wastage rather than looking for alternative energy sources. That means philosophy of energy saving. For energy saving so many people around the world has been working on that with different models. In this paper we are going to employ new strategic methods for power saving in real time for Chinthalapudi Engineering College. So the power optimization is depends upon how best a hard ware system can percepts environmental parameters like human, illumination, animals detection and so on. Here the plan is so simple philosophy of just ON the power devices whenever particular situation happens. And at the same time we will consider how quickly the system is responding for that physical situation. For this problem we can use code optimization algorithms like neural learning algorithms. This paper is very useful for power saving efficient with high speed mechanism.**

Key Words: Embedded computing machine ,RF modules, sensors, pc.

1. INTRODUCTION

The technological development place a vital role in the life's of humans. So in this project we are going to solve some practical issues facing in these days. That is power wastage. The generation of power for required level is tough most tasks. Mostly, most of the power generation is from hydral power. Due to climatic conditions rain fall is drastically reduced. So power generation from hydral plants is also reduced and coming to the point of non-renewable sources those also reduced day by day. So here our concentration is optimized power utilization is first

criteria. So we will concentrate in how to reduce power wastage rather than looking for alternative energy sources. That means philosophy of energy saving. For energy saving so many people around the world has been working on that with different models. In this paper we are going to employ new strategic methods for power saving in real time for **Chinthalapudi Engineering College**. So the power optimization is depends upon how best a hard ware system can percepts environmental parameters like human, illumination, animals detection and so on. Here the plan is so simple philosophy of just ON the power devices whenever particular situation happens. And at the same time we will consider how quickly the system is responding for that physical situation. For this problem we can use code optimization algorithms like neural learning algorithms. This paper is very useful for power saving efficient with high speed mechanism.

So neural network algorithms are inspired by the human beings so they can acquire, store, reutilize experienced knowledge. Likewise, every hard ware in this universe is a tiny neural network in this paper we are going to use hebblearning mechanism for code optimization to improve the performance of the system.

In this paper we are going to use some sensory networks to predict the humans and the system response accordingly. So to process these sensor data we need digital computing device it is able to understand the data that is coming from sensors. That sensor data is manipulated by the code embedded in the machine. Based on the logic employed in a machine corresponding action will be taken.
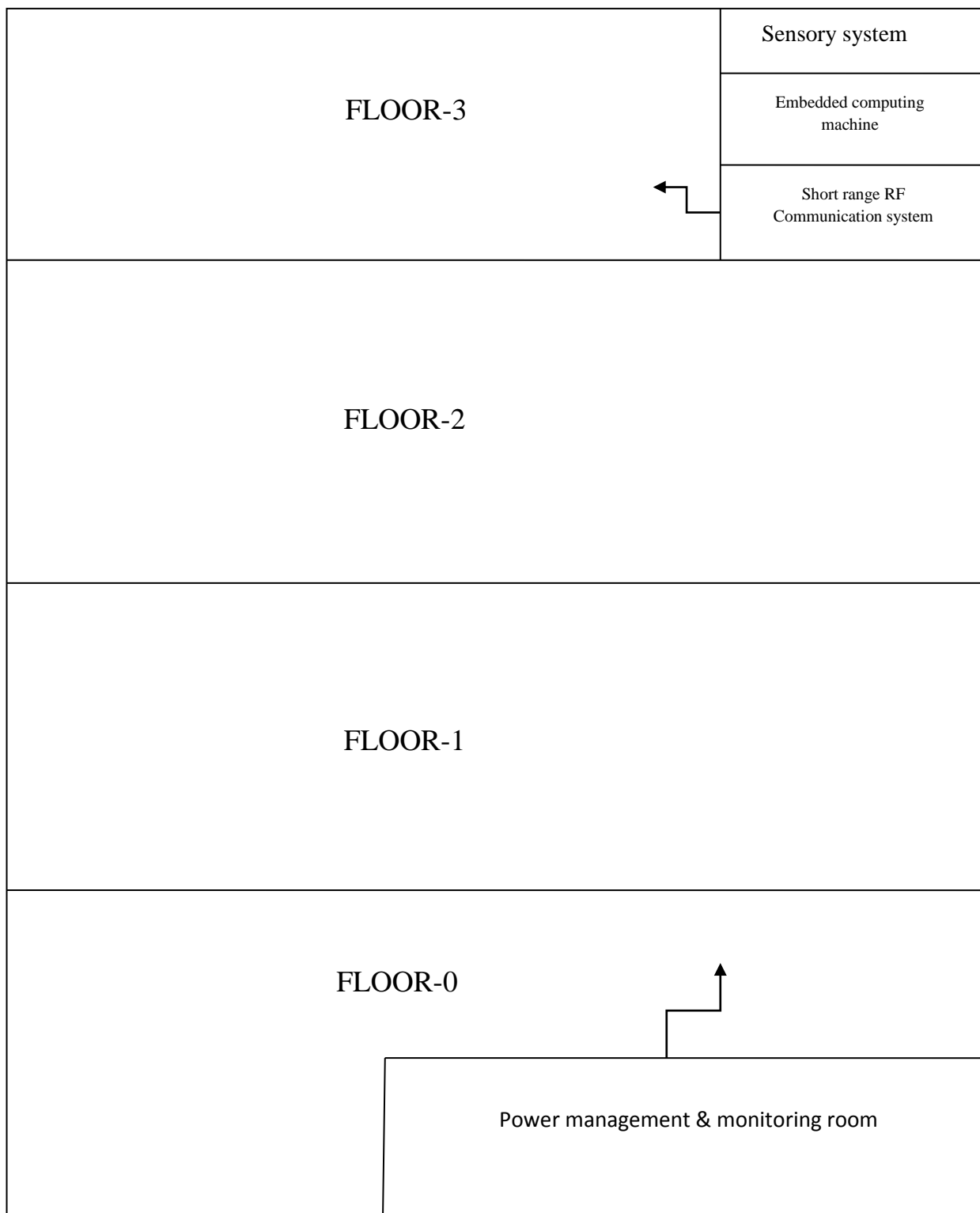
Single line diagram of CECG:

Fig -1: Architectural view of CECG

2. RELATED WORK

In this section contains information about system development. Here we mentioned transmitting section which is mounted in the rooms itself and fig3 shows the receiving section which is at ground floor. Fig2 is talk about how exactly interfacing happens. The embedded device is interfaced with lcd module for the purpose of displaying how many persons are there, sensors serves the

purpose to detect the humans. And relay sections are activated the pulse which is coming from the embedded computing device and relay closed for logic1 and opens for logic0. Accordingly particular power device will be on and at the same time that processed is able to send the data to the monitoring sections which lies at ground floor through radio frequency communication. The embedded computing device is coded with certain algorithm to optimize the code is as follows.
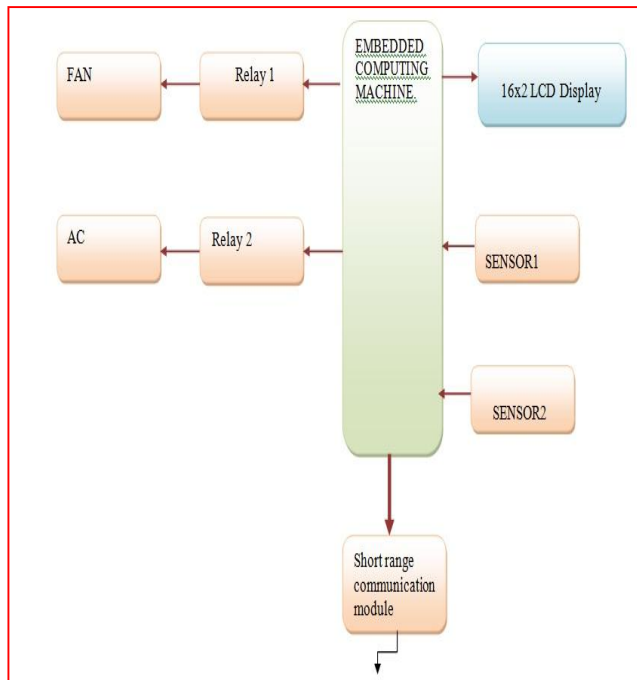
$$Wi(new) = Wi(old) + Wi(change)$$

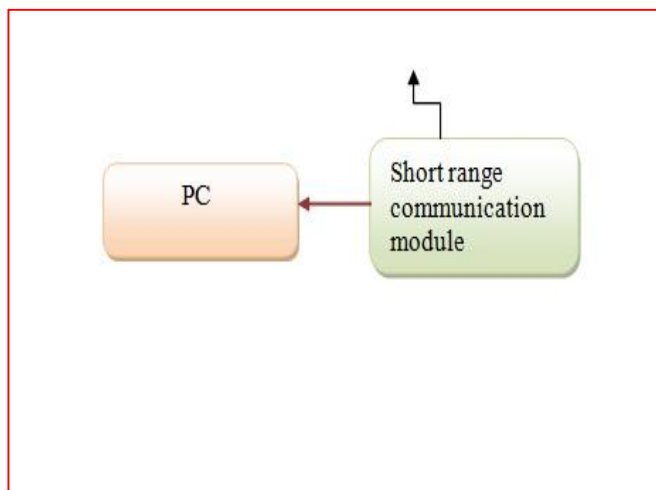Fig -2: Block diagram representation of transmission section

Fig -3: Block diagram representation of receiver section

Fig -4: Satellite view of CECG

3. RESULTS & DISCUSSIONS

The following snap shots show the developed prototype model of aimed concept. The snap shots reveals that IR sensors detects the humans which means white LED emits the IR rays which falls on the humans and reflected rays will be collected by black LED, that black LED is Acts as a transducer, by nature transducer is one who can convert one form of physical energy to another form of physical energy. This physical energy is converted to digital logics by using inbuilt ADC's in the processor. The digital logics understood by means of program and takes the action accordingly which device is going to be ON and how many persons are in and at he same time list of persons will be send through RF channel to the base station. Base station is able to receive and display the status on system.
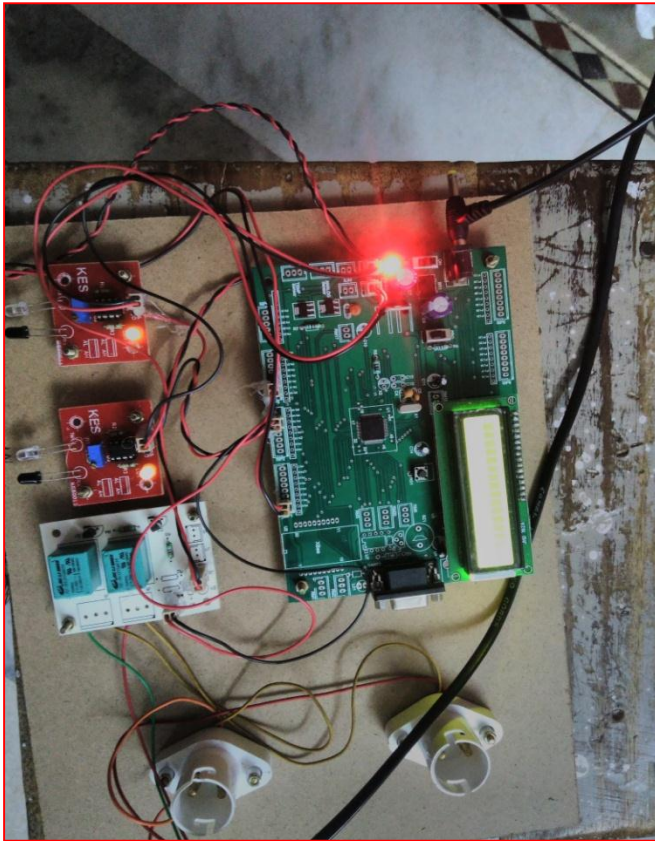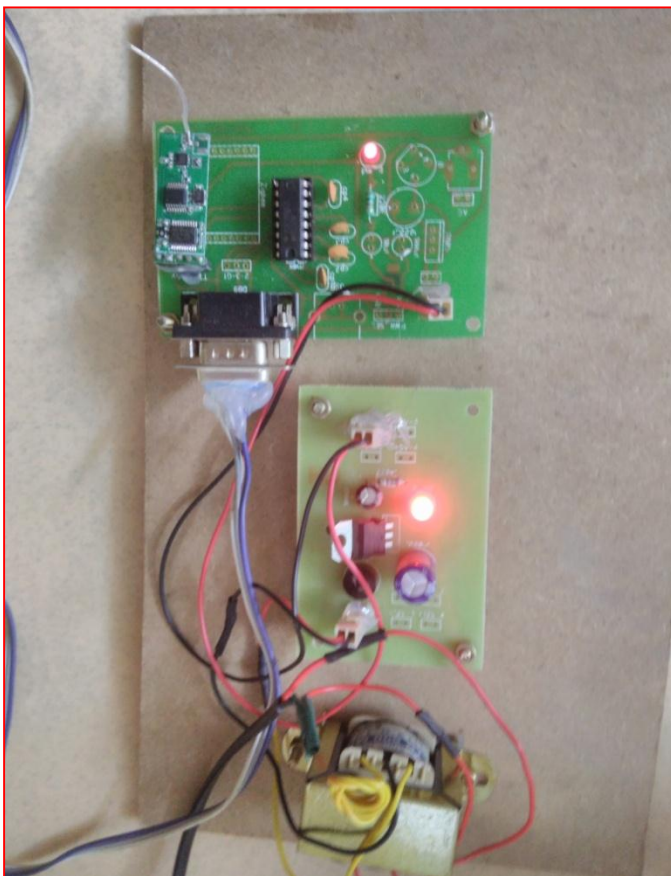
Fig -5: Transmission section

Fig -6: Receiving section

4.CONCLUSIONS AND FUTURE ENHANCEMENTS

The entire concept completely helpful to the society to make the situation to be better to save the energy in optimal way. And also the same mechanism can also applicable for controlling of devices in industries like power systems, heavy electrical machines not limited to this. This project saves not only power wastage it reduces payable amount to the electricity dept. in thousands per month and this prototype will perform the tasks in faster way because coding mechanism employed with neural algorithms. In conclusion this is the best system for power saving, payable amount reduction and working with high computing capability.

5. ACKNOWLEDGEMENT

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BIOGRAPHIES

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