**INTELLIGENT ENERGY SAVING SYSTEM**

**ABSTRACT:**

Intelligent Energy Saving System can be used in places like where lighting is very important. The libraries will be well illuminated with many lamps. When people are not present at a reading place the lighting can be made OFF and when they are present, the lighting made ON. All these can be done through by Dimming circuit and PIR sensor.

If a person entering to the monitored area, the PIR sensors activates and sense the person, gives to the micro controller. The Infrared energy emitted from the living body is focused by a Fresnel lens segment. Then only the PIR sensor activates. After sensing the person LDR checks the light intensity of the monitored area, whether it is bright or dark. Depending on the LDR output, the lamp may be ON / OFF by using Dimmer circuit.

By using this system we can adjust the speed of Fan according to the room temperature measured by Thermostat, which is connected to the micro controller.

To display the room temperature of PIR mode operation we are using the LCD display.

**HARDWAREREQUIREMENTS**

PIC series Microcontroller, opto-coupler, LDR circuit, PIR sensor, Thermostat, Zero crossing detector, Dimmer, LCD display.

**SOFTWARE REQUIREMENTS:**

HI-TECH PICC Tool suite

Languages: Embedded C

**BLOCK DIAGRAM:**

