ABSTRACT

Indonesian Intelligent Robot Contest (KRCI) is robot contest which specially atrificial intelligent to push improvement quality of robot especially in control system, and for KRCI 2006 theme is Intelligent Fire Fighting Robot which has rules, such as self running robot and with sensors be able to detct and fighting fire with scanning of baby doll existing from arena which have determined.

In this final project will be made robot system which be able to find and fighting candle fire in one of the rooms. To find fire used fire sensor that is Uvtron sensor and fighting candle fire used a DC motor with supply 5 VDC. Infared sensor used for line trace because in cadle room is located in midle of circle turn white with radius 30cm according to rule of KRCI.

System will always detect whether there is fire when entering the room, when sensor detect the candle existence hence output sensor will drop to ground and sensor will send information to microcontroller. Then system will process information to move near the fire with infrared. After finding white cicle with candle in the center hence sensor will tell microcontroller and microcontroler to actives fan moved by DC motor with mechanic systems itself. After fire off hence robot will resacn api existence. If there is no fire hence robot will going out the room. Processor system use microcontroller using AT89S52 type from ATMEL and use Assembly as languge programs.

Key word: *Sensor InfraRed (IR), sansor Uvtron, Assembly*,
                                    Pyroelectric, *mikrokontroler, AT89S52*