

## **ABSTRACT**

Intelligent Robot Contest on Indonesia (KRCI) 2009 is competed a legged robot with a few rules, including a robot must have the ability to put out the fire room. This robot is capable of running self-monitoring to space, to detect the fire, and extinguish the fire.

In this final project is designed space tracking of six-legged robot based on the standard KRCI 2009 division-legged robot. Space tracking is how a legged robot for the spaces in the field of robots to search for and extinguish fire using sensor-robot that does not strike objects (wall / obstruction) in the surrounding areas. To reach it, it is also necessary that the integration of the entire system.

Attention directed at the implementation of the space tracking of six-legged to find the fire that is applied through the program and the algorithm that is designed to use standard field KRCI 2009 division-legged robot. The entire system is governed by mikrokontroler Atmega8535 algorithms and programming languages to use C. To detect and extinguish fire, this robot work well. But overall, there are many error when is simulated in KRCI 2009 field.

Keywords: robot, KRCI, Atmega8535, mikrokontroler, algorithm