ABSTRACT

Development of science has been faster innovation progress on technology, such as their assistance in order to help some tasks that are usually done by human. Robot is one of advance technology products to answer the human needs. By using robot, we can optimize and delegate our works, for example robot can be programmed to have ability in extinguishing fire and find out burning victim location without afraid touching the fire.

In this final assignment, it has been planned a prototype of fire extinguisher robot that adopted from standard of *Kontes Robot Cerdas Indonesia* (KRCI-Indonesia Smart Robot Contest) 2008. The robot is programmed by following the standard requirement of the contest; include its simulation's field (single expert division).

The project concern is addressed to integration of each robot's sensor with Atmega8535 microcontroller. These sensors are consisting of seven of distance sensors, two of fire sensor, one of digital compass, and one of sound sensor. Determinant factor that affected in selecting Atmega8535 against other microcontroller, i.e. MCS51 type, is the selected microcontroller has speed twelve times of MSC51's speed.

The programmed robot had capacity to trace and find out burning room, doll (as burning victim), and capable to extinguish the candle fire. Robot has dimension 30 cm x 21 cm x 23 cm and 3, 5 kg in weight.

Keywords: fire extinguished robot, sensor, Atmega 8535.