

ABSTRACT

The six legged robot with eighteen servo motors robot that was explained in this final project is project has been produced by IT Telkom robot team which competed in KRCI 2010. Commonly, the robot is consists of two systems. They are controller of some sensors and controller of eighteen servo motors to make robot's movement.

In this final project, the writer make movement controller of six legs robot or usually called *hexapod* robot. ATmega32 microcontroller minimum system manages the movement controller of *hexapod* robot, which was completed by eighteen servo motors. So, it means that *hexapod* robot has three servo motors in each leg. That was meant to make a lot of style movement and of course it will make the robot more attractive and flexible.

In this final project, a lot of attractive and flexible moved have made successfully such as forward, back, turn right, turn left, step right and step left. If looping pulse less then robot's movement become faster. For example, for seven times looping pulse, robot moves forward in 0.7308 s but for ten times looping, robot moves forward in 1.044 s. Movement which successfully done are forward and back but for another movements such as turn right, turn left, step right and step left still need work harder. The explanation of *hexapod* robot with eighteen servo motors was made in hope it will be useful input for next robotic development.

Keyword: robot, microcontroller, servo motor