ABSTRACT

Along with the development of car technology and new car types, there is an increase in the interest of the public to own a car. Similarly, the driver of the car also varied from young, adult, to advanced age. However, the driver has difficulty in parking the car and looking for an empty parking lot. In this final project proposal, the authors would like to design a prototype robot mini car that can help the car drivers to be able to park the car automatically. The prototype robot mini car uses a type of steering robot or also called steering drive that will turn the front wheels. The controll system that is used is the PID that will control the robot mini movement to be stable and do the parking automatically. PID control tuning on car robot control system with Trial error method obtained PID parameter with Kp = 1.4, Ki = 0.01 and Kd = 3.1 is able to follow to setpoint with 2 second. The PID response result can pursue a setpoint change from the initial angle of 20° to the 90° setpoint in 2.36 seconds with a slight overshoot ± 14.9%..

Key words: PID, Steering, Auto Parking