Abstract

It is a challenging task to make a mobile robot navigate to a desired goal in an environment with obstacles. It is sure that, just path planning algorithm will not be able to guide the robot to the desired goal in such environment. Certain kind of Obstacle avoiding algorithm is to be incorporated along with the path planning algorithm to achieve the aforementioned objective. Among the various existing algorithms an attempt to implement Bug algorithm and Virtual goal algorithm and the comparative study on the same was done. Numbers of experiments were conducted to draw the inference that, which algorithm is better. To conduct the experiments the algorithms were run in NXPLPC 1768 microcontroller. For detecting the Obstacles the system was equipped with a ring of eight sonar. For simulation MATLAB was used. The conclusion that, virtual goal method is better than the bug algorithm is drawn finally through number of
experiments and observations.

References


**Index Terms**

Computer Science  
Algorithms

**Keywords**

Autonomous Mobile robots  
Robot navigation  
Obstacle avoidance  
Nonlinear control systems.