

# **Navigation Of Mobile Robot Using Global Positioning System (GPS) And Obstacle Avoidance System With Commanded Loop Daisy Chaining Application Method**

## **Abstract**

Mobile robot has been a major role to the application in military, industrial and agricultural purposes. Mobile robot should navigate through desire route and avoid the obstacle within the path. Many researcher come with the solution by using the various type of control and instrumentation system. The complexity of mobile robot system can make the system cost intensive and high risk. Proposed is a mobile robot equipped with GPS navigation system and obstacle avoidance system with low cost mobile structure, GPS module and sonar sensor. The combination GPS and Sonar will determine the position and obstacle avoidance for the mobile robot. Mobile robot should navigate according to waypoint that preset to the GPS module and sonar sensor detects the obstacle during mobile robot navigation by triggering the sonar sensor in sequence by using commanded loop daisy chaining application method. Mobile Robot can navigate through desired waypoint and at the same time apply the obstacle avoidance rules

## **Keywords:**

Autonomous mobile robot

Daisy chaining

Global Positioning System (GPS)

National Marine Electronics Association (NMEA)

Sonar sensor