

ABSTRACT

The development of science and technology in robotics has reached the age of autonomous robots. Autonomous Mobile Robot is a robot that can navigate independently and perform assigned tasks without human guidance. Usually used to explore an environment.

One way to control and monitor the robot is by using a Graphical User Interface (GUI). This research is focused on designing graphic data visualization design and robot control using an interface or known as Graphical User Interface (GUI). The user can give command in the form of waypoints to be reached for mobile robot. For Full Duplex communication between the user and the mobile robot was using by telemetry. Telemetry is also connected to the microcontroller to send and receive data to each other.

The result of this research is to create a GUI application display that can perform remote navigation and monitor the location and condition of the robot in real time. The application was created to quickly monitor with response in less than 1 second. Data communication that can be done remotely with a delay less than 3 seconds and the percentage of data packet loss is 0% during the data transmission process.

Keyword: *Graphical User Interface (GUI), User, Waypoint, Telemetry*