ABSTRACT

The development of technology in the field of robotics is currently undergoing rapid development. There are many types of robots created to facilitate human work, one of which is an amphibious robot. This robot has amphibious properties, where amphibians can perform exploration activities in various types of terrain, such as soil exploration, water exploration, and air exploration. To control the robot requires a control panel application that is connected to the wireless network.

Desktop-based applications which act as amphibious robot motion controllers and also to monitor the surroundings of robots using camera IP and GPS coordinates. Visual Studio Enterprise 2017 became the platform used to build this app with C # as its programming language. To control the robot with this application required a wireless connection in the form of WiFi, where commands from the application will be sent to the robot through the TCP / IP from WiFi.

This research shows that this control panel application can help and facilitate in running the robot from a distance. If the robot is used for surveillance then the control panel will be very useful because it will help the evacuation teamwork and can monitor the circumstances when there has a danger, so as to minimize the number of victims.

Keyword : Amphibious Robot, Control System Based on WiFi, Concept of ACO Algorithm, Autonomous Robot, Control Panel