ABSTRACT

Indonesian is one of the countries with the largest ocean area in the world. However, due to the vast sea conditions, Indonesia has its own challenges, namely the difficulty of supervising marine conditions due to a lack of human resources. Therefore we need a supporting tool that can monitor it as well as monitor it in real time.

Unmanned Surface Vehicle (USV) is a ship robot where the robot is more closely following other objects such as ships which are controlled by fuzzy logic. Fuzzy logic was chosen because it can be used in almost all types of control applications. Fuzzy logic itself is a mathematical methodology developed to approach human intelligence where doing something always comes from the disguise of a thought by encoding its thinking in linguistic rules. In the design of the LIDAR sensor system is used to read certain ship objects. Then the object will be followed from behind and adjusting to the fuzzy rules. After the distance and object data are obtained, the microcontroller will adjust the BLDC motor to move according to the position obtained.

The output of this system, Fuzzy Logic, can be implemented into the USV Autonomous Boat so that it can follow an object. Its application is able to read situations from a linguistic disguise

Keywords : USV,Fuzzy Logic,Autonomous Boat.