

ABSTRACT

Nowday, an automated equipments is using lots of sensor are swarming us, including autonomous swarm boat which is highly dependent with reliable input. But a limited capability for receiving inputs from enviroment of many sensors make some device less responsive to an input that cannot be captured by the sensor. This problem affects the device more than when there is no reference point in the sea.

To overcome its weakness, an image processing algorithm is used as control input for autonomous swarm boat. Through image processing, the boat can recognise other boat within camera field of view. Although image processing is more beneficial than other methods, there is a drawback, which need a lot of computing power to process the image. This affects the performace of control and communication inside swarm boat system.

With color based image processing, this system can be implemented as basic object detection with great presicion, which is 95%. But many limitations exist in this method such as can not recognise an object with distance more than 120 cm.

Key Word : Image Processing, Boat, Autonomous, Swarm Boat.