ABSTRACT

SONAR (Sound Navigation And Ranging) is a method that uses sound propagation in water to determine the presence of objects that are under the surface. SONAR (Sound Navigation And Ranging) is often used in the marine world as a military ship navigation tool. In general, the transducer used for SONAR uses a pulse signal to transmit.

SONAR will work better by using an array transducer to determine the position of a moving target, and therefore it is easier to know the shape and distance of moving objects. This Final Project is made to separate objects that move regularly using a transducer on the sensor. The transducer used is the HC-SR04 sensor.

In designing this system the HC-SR04 sensor will be controlled by the Ardunino Mega 2560 microcontroller. To move the object, a conveyor will be made which is assisted by a DC dynamo, while for the separation of objects it will use a servo. The targets used are artificial objects that are small, medium and large, then move and separate according to the size of the object.

Keywords: SONAR, transducer, *servo*, HC-SR04 sensor, *Arduino Mega* 2560