ABSTRACT

Republic of Indonesia is an archipelago with very large sea area. This wide sea has so much natural resources that can be exploited, beside that indonesia's sea area is also a global trade lanes. Because of that, there are so many ship that sail at indonesia's sea área. With that many ship, the ships sail path and activities must be monitored.

For now, the ships in Indonesia's sea area can be monitored using a system called Automatic Identification System (AIS) by received information about the ships sent by the device in the ships. To develop the identification system of ship, then a classification of ship based on image using K-Nearest Neighbour Method will be made. This system will classify the ships based on the ship's image with Gabor Filter as the feature extraction method alongside K-Nearest Neighbour as classification method. The ship will classified into 3 classes, Bulk, Crude, and LCT. The image will be classified using the data in system database made earlier. The software will be used by the simulation is Matlab.

The result of the system have a good classification accuration and a fast computational time. Accuration at 99.3%, mínimum computational time at 5,55 second and maximum computational time at 3.6 second. And the result of this Final Project is to be developed well in the future and can be put in the good realization.

Keyword: Ship Classification, Image Processing, Gabor Filter, K-Nearest Neighbour