

ABSTRACT

Division of logistic in IT Telkom is part which deals with the provision of goods, maintenance items, and replacement of the goods in the IT Telkom such as desks, chairs, garbage cans, projectors, computers, etc. In its operation, logistic division gives a label on every object in order to make the checking easier. The label is made of a sticker that is easy to be removed and affixed to other goods. This goods checking process is still using manual system. So it would be difficult to find a label that exchanged to another goods.

In this final project, an application to detect a label object and to detect its form has been made. After that, it will be matched between the label and the object form. Sample of label and object are a picture taken with webcam in BMP or JPG format. A detection of object label uses wavelet transformation feature extraction method and neural networking SOM method for feature classification process. Form of the object is detected using template matching and the label is matched with object form.

Result achieved in label detection is 89,7326 % level accurate and 0,0403 second computation time in vertically image capturing. In addition, detection of object form achieves 76,6667 % level accurate for database image with same distance, slope, background and lighting. The computation time is 0,3042 second

Keywords: *label, goods, wavelet transformation, SOM, template matching*