Abstrak (Inggris)

In this research analyzes a gradual method Eigenvehicle as a method for extracting characteristics of the vehicle, Fuzzy C-Means Clusterring (FCM) is used to separate the tire with the vehicle body and Hough transform as a method for the detection of the tire rim. The type of vehicle to be classified is a vehicle classes I to V. type vehicles class I, namely: sedans, minibuses, pickup and buses. Vehicle class II is two axles truck, class III is three axles truck, Group IV is four axles truck, class V is five axles truck.

method Hough Transform can be used to isolate the characteristics of the tire rim inside a vehicle image, the number of tires that can be detected for the classification of class III, IV and V. While the class I and II using the method Eigenvehicle that is a combination Principal Component Analysis (PCA) for feature extraction data model and Distance From Vehicle space (DFVs) to classify the vehicle by looking at the distance difference of PCA and the training data .

Data modeling and test systems acquired from recording the arrival of the vehicles at the Rest Area Toll Purbaleunyi KM 97, with as many as 464 test data and 10 data models. While accuracy is obtained for 93.9% with the number of parameters FCM as 6 cluster, the ratio of the length of vehicle and tires on Hough Transform is 17 and the threshold of Eigenvehicle is 1300.

Keywords: Image processing,vehicle classification, Eigenvehicle, Hough-Transform, Fuzzy C-Means Clustering