VEHICLE SPEED DETECTION SYSTEM IN REAL TIME TRAFFIC INFORMATION SYSTEM

Name             : Pribadi Hartoto
NRP             : 2209 105 081
Dosen Pembimbing : Dr. I Ketut Eddy Purnama, ST., MT.
                  Muhtadin, ST., MT.

ABSTRACT

In this final project will be designed a system and program for detecting the speed of vehicles from a video recording. The results of speed detection may be a reference to enforcement of traffic regulations.

Programs created using background reconstruction method and the frame difference. Background reconstruction method derived from a number of video frames and used as a reference for foreground extraction. Frame difference method is extraction of the foreground with the difference in a frame with a reference background. Moving object to be measured displacement to travel a certain distance as a reference speed calculation.

Results obtained from tests on several video recordings of traffic gives fairly good results. The use of frame difference and background reconstruction method to detect vehicles movement, computation time and mileage can be done on video recordings of traffic. The accuracy of measurement up to 98% at a reference speed of 50km/h. The lowest accuracy occurred at a vehicle speed 80km/h, with only 93% accuracy. The accuracy depends on the measurement of the shift per frame, the shadow and the occlusion of vehicles object. This final project is expected to complement the research module Speed Enforcement System (SES) on Intelligent Transportation System study.

Keywords: background reconstruction, frame difference, foreground, speed enforcement system, intelligent transportation system