

ABSTRACT

Technological developments are now growing very rapidly, many ways to do to make human work easier, making existing systems much better and more efficient, one example of the problems that often occur in the present many of the traffic accidents caused by The high speed of the driver in driving his vehicle One example of the scope of the place where accidents often occur is a housing complex, often there are riders in residential complexes who drive at a fairly high speed to drive in a residential complex, this of course done intentionally or unintentionally, It drives at high speed in the housing complex is very disturbing and endangering others and yourself, it is necessary a technology system to overcome the problem so as to prevent accidents.

. The writing team designed a system that can detect motor vehicle speed captured / captured by web cam camera using frame difference method and then output from this system ie warning of siren that will light up if speed exceeds standard limit and gate to be closed automatically using DC motor .

Based on the results of testing on this final task, the camera is placed on the pole with a height of + - 5.5 meters with a camera angle position of 30 degrees.Result of accuracy of calculation of speed obtained in system equal to .The camera can only detect the calculation of vehicle speed in the ROI area only one vehicle object in the vehicle condition close to each other. In this system the determination of the angle on the camera affects the accuracy of the calculation speed that is captured or recorderd by the webcam camera, the best angle is 60 degrees at 5.5 meters height of the pole. Gate driven by DC motor capable of closing the gate as wide as 4 meters perfectly at a maximum speed of 40 km/hour. The gate siren will not be active if the vehicle is detected below 30km/hour.

Keyword : *camera, microcontroller, DC motor*