

Abstract

This final project explores the modeling and simulation of traffic flow, both for single lane and for the road network. The road network in question is a collection of some of the trails are connected by one or more intersection (junction). To model the flow of traffic used through the conservation equations of fluid dynamics approach. Conservation equation for a vehicle on a road used equations used LWR while at the intersection of Rankine-Hugoniot equation. Numerical solution for the conservation equations solved using the method of Godunov. Numerical simulations conducted to determine the traffic congestion caused by traffic lights. Numerical simulations are displayed in the form of traffic density for the track and for the road network.

Keywords: road network, LWR equation, Godunov method, fluid dynamics