ABSTRACT

The particles change from one place to another in a track called Molecular Dynamics Simulation (SDM). Molecular dynamics simulations can also be performed on the approach Car Following Model (CFM). Car Following Model can also be described as the changes that occurred between the car and the car follower leader to get a safe distance away. By comparing to two conditions, namely conditions Current and Solid condition that seemingly change of position and change of speed of the car. With this approach can be simulated accompaniment vehicle condition that causes the problem. In this study discussed the condition of the vehicle accompaniment method approach Optimal Velocity Model (OVM) that is focused to observe changes in the vehicle's position, speed of the vehicle. Optimal Velocity Model is one of the methods to model the existing traffic problems as accompaniment of the vehicle. In this method the two trials that, when the current condition and when the condition of the vehicle dense to know the difference and the changes that occurred between the two. Besides the Optimal Velocity Model also able to determine the condition of equilibrium is the condition of the vehicle accompaniment stable and unstable. The results there are two graphs, charts the trajectory of the position versus time and velocity versus time graph trajectories. The conclusion of this study was able to determine changes in the car's position, speed of the car, when the condition of current average speed of the car began to stabilize in the 3rd iteration while in solid state auto iteration 5th and accuracy obtained by researchers from garfik trajectory is 88.88%. We make accompaniment model of the vehicle is expected to help to reduce traffic problems that exist in this country.

Key Words : *Car Following Model, Car Leader, Car Follower, Car Following Model, Optimal Velocity Model..*