

Coordination between Traffic Light System and Traffic Circle Flexible Traffic Simulation Program

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Abstract: Congestion is a serious traffic problem in many countries in the world, which attracts many social attentions. In road network systems, it easily occurs at intersections, weak points in traffic systems. To improve their capacities, many pieces of research have been done and applied, in which traffic light systems and traffic circle ones are usually used. They are truly effective ones in traffic systems especially in the developing countries, where there are not much money invested in infrastructure. Coordination between them is a considered alternative in this article. Although many mathematic models as well as simulation programs have been used to solve traffic jam problems, they are not enough effective in special-flexible traffic systems like Vietnams ones. Therefore, a specific traffic-simulation-program is used. Simulation models are constructed to describe as well as compare or evaluate suggested alternatives such as arrangements of traffic light systems, setup of traffic-circle, and coordination between them at the intersections. Besides, logic of simulation program is outlined. Simulation results are presented and evaluated. Finally, some conclusions are proposed.

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