ABSTRACT

Simulation is one of the most useful and powerful applications of using computers. Through some rather simple and straightforward simulations we can obtain a very accurate approximation to complicate situations. For example, the queuing theory is used to analyse the efficiency of a customer-service system.

Computer simulation is one of the popular approaches to the design of toll plazas. Toll plaza configurations such as behaviour of the individual toll booth, service pattern, behaviour of vehicles, traffic management have been studied in the literature. Traffic flow types can be another influential factor when designing toll plazas, especially in case that traffic flow information is not available, but only the estimate of traffic volumes. Few studies have reported the effect of traffic types on toll plaza performances. In this report, a discrete-event simulation method or stochastic event simulation modelling is used to analyse the sensitivity of toll plaza performance for traffic flow. For this the probabilistic traffic flow, is considered.

In this project, there is a simulation of a toll plaza system by applying the queuing model and picturizing the effect of the method on the performance of the toll plaza.

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