

# **DECISION SUPPORT SYSTEM FOR SOUTHERN HIGHWAY GATES**

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by

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## ABSTRACT

Presently Sri Lanka has been recognized as a country with a rapid development in many sectors as economy, transportation, healthcare, education, etc. Therefore, transportation plays a main role of the development of the economy as well as the quality of lives of the citizens. As a result of that the first express way was born in year 2011 as Southern Highway.

Since the express way concept is new to our transportation culture, it has identified several problems which affect to the efficiency of the highway and caused to limit the advantages of the highway. According to the current system the payments and suitability confirmation of a vehicle have to be done manually at the existing gates which may cause for the long vehicle queues at highway entrances. It is a major problem which reduces the efficiency of the road and increases the fuel wastage causing the environmental pollution as well.

This project proposes a computerized automated decision support system for all the main functionalities while proposing a criterion to maintain the roadworthiness of the vehicle by performing a Suitability Test. The commuters will be facilitated with an online payment service which is one of the major parts of the project. A desktop application is used for acquiring the vehicle details with the help of image processing techniques. The system maintains a loyalty client category so that they are provided over drafts with predefined limits in case of lack of credits while travelling. When a particular driver on his way on the highway, before he reach to the exiting gate he can recharge his own account just by sending a SMS.

The Decision Support System provides several benefits to the drivers including all the road users, the national economy and the environment. System avoids unnecessary queues and delays at the gates which causes to a pleasant drive for the drivers. Therefore, stressfulness of the drivers is minimized and it resultants to prevent road accidents.