Abstract

Objectives. Traffic congestion in the tollbooth to do the toll transaction payment is common nowadays. The traffic congestion in the tollbooth actually can be minimized by paying it electronically, so that the toll user does not have to stop their car in order to pay the toll. This thesis objective is to know how to implement the system used for the electronic toll collection system.

Method. To do this thesis I use literature review and case study. I analyze the system used by the other country and how the procedure in implementing the system,

Result. To implement electronic toll collection, there are three system should be installed, there is automatic vehicle identification (AVI), that is used to identify the vehicle passing the tollbooth, automatic vehicle classification (AVC) that is used to classify the vehicle passing the tollbooth, because the vehicle toll payment is based on the vehicle type, and video enforcement system (VES) that is used to capture the image of the vehicle license plate, so that if there is vehicle passing the tollbooth without paying, the captured image can be saved and will be processed later. To enable the electronic transaction, the vehicle passes the electronic toll lane has to have tag mounted in the vehicle windshield, and a reader has to be installed in the tollbooth along with its antenna.

Conclusion. For the success of the system, there are three system has to be installed, however in order to make the system success, it is not only technology installed has to be considered, but also the procedures of implementing the system.

Keyword: RFID, electronic toll collection, automatic vehicle identification, automatic vehicle classification, video enforcement system
Preface

Traffic congestion in Jakarta is worsening over time. The traffic congestion also happens in the tollbooth when the vehicle wants to do the toll payment transaction. However the congestion in the tollbooth can be minimized if the toll payment can be done automatically so it will not need the toll user to stop their vehicle to do the transaction. For that purpose, certain technology has to be installed to support the electronic toll collection system.
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