User Authenticated Electronic Toll Collection System using Image Processing

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Abstract: *Now a day there is a huge rush at the toll plazas in order to pay the toll tax. On any toll plaza the vehicle has to stop for paying the toll amount. Hence we are trying to develop a system that would pay the toll amount automatically and reduce the rush at the toll plaza. In our system user registration is done with information like name, address, mobile number, vehicle plate number, vehicle type, etc. Camera is used to capture number plate of vehicle. System will check the database, if match is found then toll amount will be deducted from the user's account and then gate will be open. Notification will be sent to the user via message. Our system is able to count the total number of vehicles that are passing through the toll plazas. By doing automation of toll plaza we can have the solution over money loss at toll plaza by reducing the man power required for collection of money and also can reduce the traffic at toll plazas which indirectly resulting in the reduction of time at toll plaza.*

Keywords: Image Processing, Toll Collection, Automation, Unique Identification, Raspberry Pi

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