**Improvement in Toll Collection and Anti-theft system**

As we know that, a lot of time is wasted in paying toll at the highways. So, there is a need to bring some revolutionary changes in the tolling methods. The Indian govt has taken steps in the improvement by introducing FASTag technology. This technology works on Radio frequency Identification (RFID). The major issue with is technology is that still the traveller has to wait at the toll booth for the electronic tolling to get verified. Until the payment is conformed with the service provider barricades are not opened.

This can be revolutionised, by few changes in the system. Below are the stepwise changes need to be done to get the smooth tolling: -

1. RFID detectors must be deployed at some distance (approx. 50m) from the main toll booth.
2. When a vehicle enters the lane, if the detector detects the FASTag card, toll amount is automatically deducted from the registered prepaid account of the person.
3. IF in case the RFID doesn’t work, the slow-motion cameras deployed at the roof of the toll booth get activated to capture a video of the vehicle passing.
4. The captured video will be then processed at the centre, and the vehicle registration plate will be extracted by image processing from the frames of that video.
5. The amount will be then deducted from the linked prepaid account.
6. If in case the prepaid account doesn’t have sufficient balance, a challan will be issued under the name of the owner of the car and will be sent to his/her registered address with a slight penalty added to this toll amount.
7. The person will be given a time of 30 days to pay the amount, if he/she fails to do so, the nearest police station to his/her house will be informed about the situation.
8. Each time the vehicle crosses any of the toll booth, an SMS will be sent to the registered mobile number, with the details of the toll booth and also the amount deducted.

These changes in the system can will bring the following improvement: -

1. No need for vehicles to stop at the toll booth.
2. This is a major step towards Digital India project of the government.
3. This system will help in theft control and detection, as soon as vehicle will enter the toll road, and crosses the toll booth an SMS will be sent, with the help of which movement of the vehicle will be detected.

Below are the links to the supporting videos related to this implementation.

<https://www.youtube.com/watch?v=IX0rFjPuNV4>

<https://www.youtube.com/watch?v=eT0Te0fiYzE>

<https://www.youtube.com/watch?v=0XKHKqLi_HE>

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