**Smart Toll Collection System**

Abstract:-

This paper is related to RFID technology; this system uses a tag and the reader which collects information of vehicle passing through the toll plaza and will automatically debits the toll amount from the prepaid account of each vehicle, which in turn will reduce the traffic congestion and human errors. The vehicle owner has to register his vehicle with RFID tag, creating a rechargeable account.

A manual toll collection system is been used widely in India. But it is not very reliable. Manual toll collection system requires more processing time at the toll booth. This leads a very long queue at the toll booths and results in increase in pollution in that area. This also increases the traffic resulting in waste of fuel.

This project is designed to reduce these kinds of problems which are being faced by the travellers. This project will reduce the queue in front of the toll booths and pollution to some extent. This will also reduce the cost by less manpower requirement. This will also ensure correct toll collection & correct record keeping.

The project focuses on the collection of toll by RFID [Radio Frequency Identification]. The RFID card uses RFID tags for identification. Each card is given a unique number which is been saved in the system. This unique code is used by the RFID reader to get the information embedded in the tags.

In this system, each vehicle is given these tags. Every Toll collection booth will have a RFID system setup. The only thing driver needs to do is place his RFID tag on the reader. RFID reader will identify the unique code and will collect the amount of toll from the account the vehicle holds. After the toll is deducted, driver will receive a message for toll amount deducted and the remaining balance in his amount. This information will also be displayed on the screen at the toll booth gate.

After the toll is deducted, system will open the barrier and the vehicle can pass through.

This project can be a part of “SMART CITY” concept announced by Hon. Prime Minister Narendra Modi.

Keywords- RFID Tag, RFID Reader, Toll collection, prepaid account