Synopsis

On

***“RFID Toll Collection System”***

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**Under Guidance of**

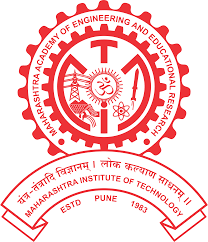
Prof. M.S. Kulkarni

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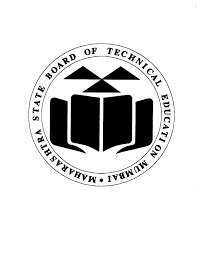


**DEPARTMENT OF E&TC ENGINEERING**

**MAEER’S MIT POLYTECHNIC**

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Affiliated to



***RFID Toll Collection System***

**Introduction:-**

A manual toll collection system is been used widely in India. But it is not very reliable. Manual toll collection system requires more time to collect the toll. This leads a very long queue on the toll booths and results in increase in pollution in that area. This also increases the traffic.

This project is designed to reduce these kinds of problems which are being faced by the travelers. This project will reduce the man power and the queue in front of the toll booths and pollution at some instance.

This 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 car 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 deduct the amount of estimated toll from the account the driver holds. After the toll is deducted, driver will receive a message saying about the toll amount deducted and the remaining balance in his amount. This information will also be displayed on the screen provided in the system itself.

After the toll is deducted, system gives the instruction to the motor which opens the barrier and the driver can leave for the remaining journey.

If a driver does not have the toll amount in his card, there is a facility in this system to recharge his account with desired amount.

This project will help in “SMART CITY” project layed by our Prime Minister Hon. Narendra Modi.

**Block Diagram:-**

Keypad

RFID Tag

**MICROCONTROLLER**

RFID Reader

Display

Power Supply

Buzzer

Motor

GSM Module

**Features:-**

Man power is reduced.

We get a message of toll amount and remaining balance in the account.

Queue in front of toll booths is reduced.

Pollution gets decreased.

Toll information is displayed on the screen.

Fuel consumed is less.

Traffic gets reduced.

Requires less time to pay the toll.

**Limitation:-**