College : Shah And Anchor Kutchhi Polytechnic

Project : Automatic Toll Collection System

Guide : Ms. Pooja Desai

Participants: 1) Vaibhav Gala 2) Rahul Namdeo

2) Mohit Jain

- **Theme of The Project:**

  This project is based on barcode laser technology. Originally this project was based on RFID technology which was complex to install and use and was very costly. But this new module which uses barcode laser technology is cheap and easy to install and use.

- **Working Principle:**

  This paper focuses on an automatic toll collection system (ATCS) using barcode technology. The proposed barcode laser system uses tags (barcode) that are mounted on the wind shield of vehicles, through which information embedded on the barcode are read by barcode readers, the proposed system eliminates toll authorities to manually perform ticket payments and toll fee collections, respectively.

- **Hardware Modules:**

  Barcode:
  A vehicle will hold a Barcode tag. This tag is nothing but unique identification number assigned. This will be assigned by RTO or traffic governing authority.

  Barcode Reader:
  Barcode Reader will be strategically placed at toll collection center. Whenever the vehicle passes the toll naka, the tax amount will be deducted from his prepaid balance. New balance will be updated.

- **Software Modules:**

  - Operating system :- Windows XP Professional
  - Front End :- Microsoft Visual Studio .Net
  - Coding Language :- C#
  - Database :- SQL SERVER 2005

- **Applications:**
  - Makes traveling more convenient, reduces travel times especially during festive. seasons when traffic tends to be heavier than normal.
  - Saves fuel and thus increases fuel economy.
  - Reduces auto emissions.
  - Reduces wait time at toll booths.
  - Increase highway capacity. Processes 250 – 300% more vehicles per lane, reducing delays and traffic congestion.