Revised Proposal for Main Project

Govt. College of Engineering Kannur
Dept. of Computer Science & Engineering

Title of the Project **:** Automatic Toll System

Name of the Guide **:** Asst Prof Shimna M S

Group Details

Group no: 18

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Type of the Project **:** Embedded Systems

Objectives of the project

a) Reduce human resource for maintaining a toll pass system
b) Implement a user friendly toll fee method
c) Save time and reduce traffic congestion at toll gates.
d) A camera captures the picture of number plate for vehicle identification.
e) Design advanced traffic management system.
f) Design automatic vehicle classification.

Expected Outcomes

a) Create a user friendly traffic management system.
b) Design Automatic vehicle classification.
c) Effective toll collection by minimising traffic impacts.
d) Reduces waiting time at booth.
e) Increases fuel economy.
f) Reduces travel time.
g) Improve communication skill.
h) Improve language skill and presentation skill.

Abstract

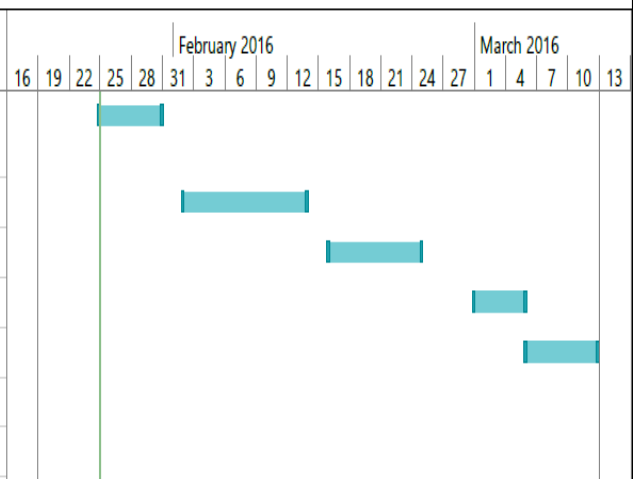
Traffic congestions at toll booths are a phenomenon noticed at all toll booths around the world. Traffic conjunction nearby tolls causes wastage of time and unwanted pollution. One of the methods proposed to minimise this traffic congestions is to implement an RFID based automatic toll plaza but one of the major problems of this system is that it requires an RFID tag to installed on every vehicle that uses this facility.

The main objective of this Automatic toll system is to implement a user friendly toll free system which saves time and reduce traffic conjunction. In the proposed system a camera will capture the image of number plate of the fast moving vehicle. Using image processing techniques the registration number of the vehicle is extracted. This registration is passed on two the central server. At the server the server matches the obtained number against the central database and obtains the vehicle type and the registred owner's details. The corresponding toll is levied against the above mentioned registration number based on the type of vehicle. The owner now has the option to pay the toll at the various road tax offices or online within a span of two months. Failure to clear dues within two months will result in fines.

Facilities Required **:** Project Lab, Internet, Monitor and Peripherals

Gantt chart

ID	Task Name	Duration	Start	Finish
1	Requirement analysis and feasibility study	6 days	Mon 1/25/16	Sat 1/30/16
2	Collecting materials required	10 days	Tue 2/2/16	Sat 2/13/16
3	Detailed design and execution	7 days	Tue 2/16/16	Wed 2/24/16
4	Build prototype	5 days	Tue 3/1/16	Sat 3/5/16
5	Testing & Debugging	6 days	Sat 3/5/16	Sat 3/12/16
6				
7				



Budget estimate for the project:

#	Particulars	Amount (Rs.)
1	Components (Raspberry Pi, IR transmitters, Digital web camera)	8,500
2	Consumables	1,000
3	Research Literature	1,500
4	Contingencies	1,000
5	Total	12,000

References:

[1] Ayob Johari, Mohd Helmy A. Wahab, Liew Chia ,M. Izwan Ayob "Image Processing of Moving Object Captured and Received by GPRS/GSM Modem" published on 2013 Third World Congress on Information and Communication Technologies (WICT).

Declaration By Group Members

This proposal is submitted in partial fulfilment of the requirements for the B. Tech degree programme and we agree to carry out the project work in accordance with the rules and regulations of the department.

Signature of members

1 .Ajay Sangamithran p

2. Emmanuel Hentry

3. Jeffrey Jose

4. Vibin K Vinod

Declaration of Project Guide

This proposal has been submitted with my approval as the project guide and I am ready to guide the project work.

Place: GCE, Kannur

Name of the Guide:

Date: 19/01/2016

Signature: