# TRAFFIC MANAGEMENT SYSTEM

**Information System Design Project**

**Report on Scope Definition(Week 5)**

**(CSE 308)**

CSE A2

Group 2

1005032

1005036

1005042

1005050

Traffic management system is an automation system that can give users information about following things:

- Available routes from one place to another.
- Available vehicle in those routes.
- Highway assistance(tolls,bridges,filling stations)
- Optimal path from one place to another will the least jam probability.
- Vehicle Renting

To design and analyze the system the scope definition plays an important role. The scope definition phases may be divided into the following parts:

- Existing System Analysis
- Baseline Scopes
- Projects Worthiness
- Possible Roadblocks
- Solution

## Existing System Analysis:

1. Direction
    - Unknown Places: Sometimes we go to unknown places. To find paths in unknown places we have to use Google map or manual queries.
    - Time Wastage: Manual query is a time consuming thing. Besides Google map is also a time consuming thing.
2. Jam Count
    - Faulty Route Management: Existing Route Management is faulty.
    - Time Wastage: Due to faulty route management a lot of time is wasted.
3. Renting
    - Manual Renting : Renting procedure is stil manual.
    - Time Wastage : Lots of time is wasted due to renting procedure.

4. Highway Assistance

    - Lack of Information about Filling Stations and tolls
    - Careless Driving in Accident prone Roads
    - Manual Queries of Services

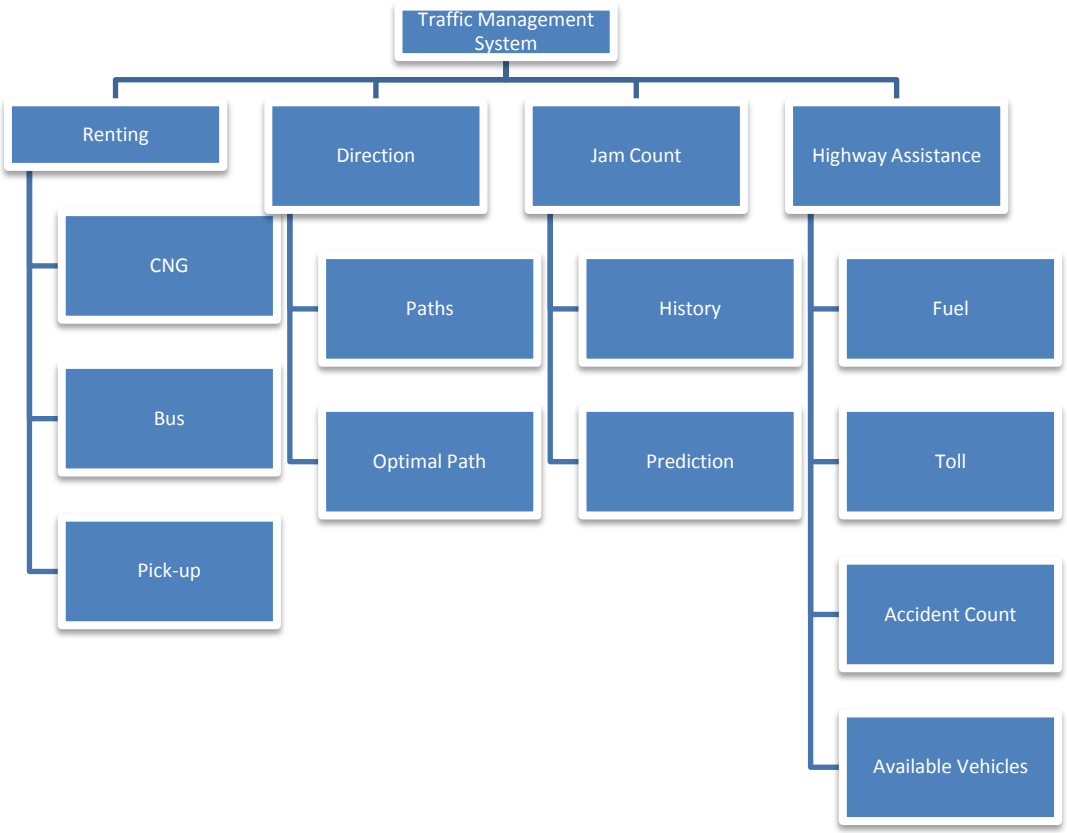


Fig: Traffic Management System

## Direction:

This section includes the available routes and the optimal path for our desired destination. So we divide this section further in two types:

- All possible paths.
- Optimal paths
  We now give a short description on these subsystems:

## All possible paths:

This section provides the user with all possible way to reach the desired destination from the current place. For this implementation we will take help from Google map.

## Optimal path:

This section provides with the best route means the route that consume less time than the other possible routes.

## Jam Count:

According to our country's perspective traffic jam is a common scene. The implementation is to reduce the users' harassment by providing the information about the roads jam condition. We will provide the information from previous condition. It's  a predictive information generally given from last month survey. We collect survey information through the FM radio or by other means.

The subsystems are following below:

- History
- Prediction

## Highway Assistance:

In this subsystem there contain the information about the highway conditions.The subsystems are following :

- Fuel
- Toll
- Accident count
- Available vehicles

## Renting Vehicles:

This subsystem again can be divided into several components based on the type of the vehicles as we desired to rent. We may have emergency issues so we divided the rent part into two types.

- Normal Renting.
- Emergency Renting.

The following components are described briefly here:

Normal CNG Rent: This type of renting refer to the type in which we book a CNG a day earlier if the CNG is available on that particular day. For this case renting cost will be normal.

## Emergency Renting:

In the case of emergency, we will design a subsystem that manages the emergency requirement of people. This subsystem connects with the central CNG control unit. In each CNG station, there will be some reserved CNG's for emergency cases. If any user looks for a CNG for his emergency, he just contacts with the control unit and the control unit will provide CNG from remote CNG station to his current address. In this case the cost will be higher than normal renting.

## Bus Renting:

In this subsystem we provide users to rent buses easily for picnic, official tour, and study tour, industrial tour etc.The subsystem will be filled with the information about the cost of renting. The cost may be calculated per kilometer.

## Pickup Renting:

In our daily life we often have to carry our goods to certain places. In this case most often we face problem (not getting the vehicles).To solve this problem our subsystem provide pickup renting easily. The cost will be based on the distance and the amount of goods we want to carry.

## Scopes Not Implementing:

We cant implement some important features due to resource problems such that

- Waiting service(need GPRS connections in each buses)
- Emergency jam exit(required art technology)
- Traffic control(Need more manpower and huge budget)

## Project's Worthiness and contribution:

- Raising awareness
- Saving time
- Providing crucial information
- Effortless communication system
- Decreasing traffic jam
- Developing whole communication system

## Possible Roadblocks:

- Reaching CNG auto rickshaw, bus, pick-up drivers
- Reaching media
- Getting daily updates
- Reaching traffic control department
- Reaching roads and highway department

## Solution:

- Proper advertisement
- Ensuring drivers about earnings
- Ensuring people about safety