**Team B - Ekathra**

**ISSUES TRACKING**

There are basically five kinds of models in the traffic modelling system where the traffic in various models is to be considered and controlled according to certain traffic rules and limits.

In this project we have come across the below issues:

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| **S.No** | **MODEL** | **ISSUE** | **SOLUTION** |
| 1 | 2-way stops. | There can be collisions with the vehicles on either sides if the reaction time is more in some cases and less in some cases. | Assign some time/distance gap so that two consecutive cars would not collide. |
| 2 | 4 way stops. | Combining various models of traffic systems in a sequence, so that there would be proper simulation is a challenge. | Yet to solve. |
| 3 | Roundabout. | Controlling the traffic on all the roads involved in a roundabout is a challenge as it difficult to control the traffic. | We will use the some algorithm to make sure all consecutive cars should not collide and thus it would not matter how many cars would be there. |
| 4 | Issue related to both 2-wayand 4-way roads. | Speed should be varied according to the road model such as, 2way, 4way, round about etc. If a random value is assigned to the vehicle, in few cases there might be a need to stop at a stop board, but a car with a high speed might have to stop suddenly when the stop board appears. | In code there would be a limitation set up using flags, such that if there is a stop sign ahead the vehicle should come to halt. |
| 5 | Issue related to roundabouts. | The direction constraints are to be considered in case of round about traffic models, suppose there are two vehicles approaching in the same direction, where one vehicle is in the circular path of round about then the vehicles on each side need to be controlled at the same time such that neither of the vehicles collide. | The direction constraints are to be limited by the help of programming the road system by using conditions according to the present direction and speed of the vehicles in action. |
| 6 | Issue related to all traffic models. | The density of the traffic should be considered as a major parameter, where in case of very high density of traffic if the user gives a low speed input then it would cause the traffic jams frequently. | Yet to solve this issue. As this whole thing depends on the user input, the user should decide what kind of inputs he is going to provide. But limiting the user input to certain level to obtain an efficient traffic flow control is yet to be decided. |
| 7 | Issue related to T- Junction roads. | The traffic control at the T-junction roads is difficult to control without the collision of the vehicles in the action. | When in T-junctions the speed limits of the vehicles must be set according to arrival rate of vehicles in either direction and the reaction times also must be considered while programming the road system for T-Junction. |
| 8 | Issue related to T-Junction roads. | The direction constraints are very crucial in case of T-junctions. If the directions of the vehicles and stopping the vehicles on a particular side of junction are not considered there will be collisions. | To avoid this issue we can consider programming the T-junction system  By providing proper limitations in terms of directions and controlling the traffic based on density of the traffic at this particular model. |
| 9 | Issue related to the traffic signals. | The placement of the traffic signals at appropriate road systems is also a challenge. | By examining each kind of road system and the behavior of the various vehicles at different road systems we shall decide where to plant the traffic signal poles. |
| 10 | Issue related to the traffic signals. | Placing the traffic signals at few places can cause some confusion in the traffic flow and make it more complicated. Placing the traffic signal in a roundabout traffic system can cause few troubles such as collisions, traffic jams and increase in the density of the traffic in a particular lane. | Yet to be resolved as there is investigation taking place regarding the placement of the traffic signals. |