

Muhammad Rohail Usman

Autonomous Systems Lab

Milestone 1

Scenario Description:

For a platoon of 3-5 trucks, a lane-changing for the platoon is planned to be executed. For instance, a platoon of three trucks is considered: the Leader truck, Middle truck, and the Last truck.

Once the system demands a lane-change, speed of the platoon and the speeds of the vehicles in the target lane is collected via the radar sensors. A suitable space in the target lane is marked and tracked via cameras integrated in each of the three vehicles. If the length of the platoon matches the tracked space in the target lane and all the essentials (platoon speed, speed of the front vehicle in the target lane, speed of the rear vehicle in the target lane) is fulfilled. A lane-change for the platoon is executed.

Sequence diagram

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