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Collaborative Control Of Autonomous Cars

Milestone 4 Report

Overall Progress

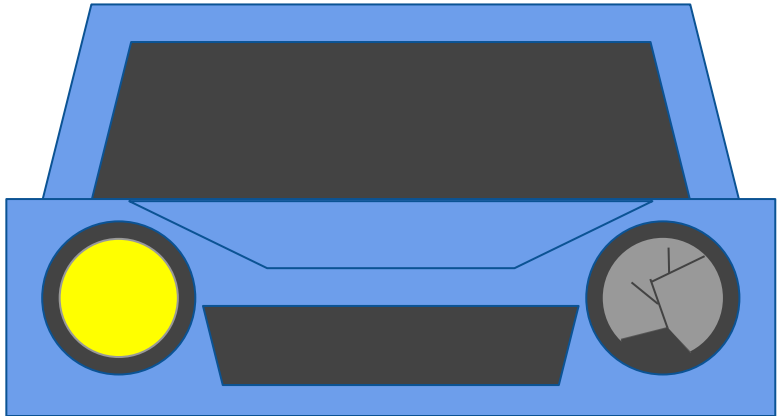
Adjustments to Local Planner for Collaborative Control - 30%

Logitech Steering Wheel Haptic Feedback - 75%

Scenarios Implementation using RoadRunner - 30%

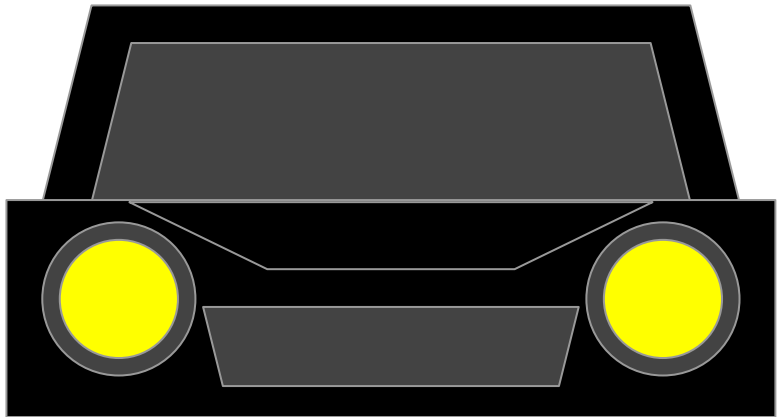
Adjustments to Local Planner

- Reset waypoint queue whenever user input is recorded
  - Should make the autopilot pathing more normal
- Complication: unexpected compilation error in collaborative control
  - Not related to changes made, but prevents testing
  - Investigation ongoing



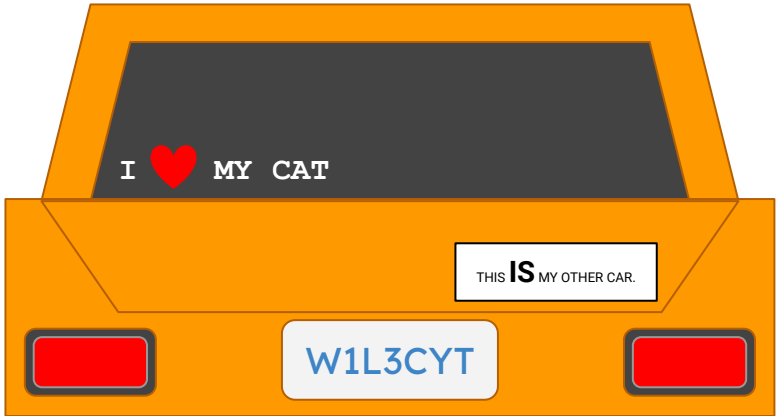
Steering Wheel Haptic Feedback

- Steering wheel does not feel “real” in its current form
  - There is no feedback, the car “feels” like it turns too much even though the degrees are 1:1 with a real car
- Logitech Software must be used - it has the SDK and drivers needed
  - The idea is to add some resistance to the wheel when turning to make it feel more “realistic”

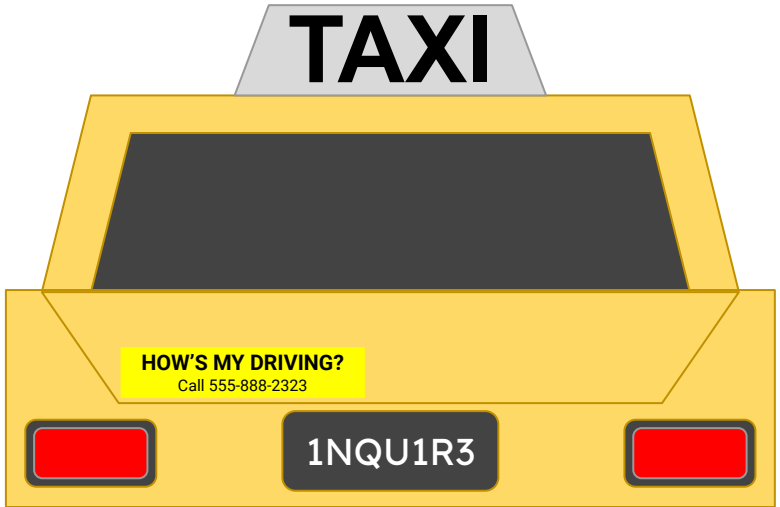


Scenarios Implementation with RoadRunner

- RoadRunner’s GUI:
  - Easy and faster way of scenario creation.
  - New map and road creation based on scenarios to be implemented.
- Scenarios in previous milestones:
  - Encountered compilation and running issues.
  - Noticed bugs in vehicle detection when running scenarios.
- No new scenario implemented in this milestone.



Plans For Next Milestone

- Begin real-world testing
  - Enlist people to go through the created scenarios on the simulator
- Combine disparate elements
  - (collaborative control, scenario runner, dashboard)
- Test more scenarios

Questions?