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8th Week Report

This week we have completed all maneuvers except crash avoidance and combined following, external leave command, leaving and rejoining parts. We have also tested last one sensor under different light conditions.

Combining maneuvers and signal.

After implementing leaving maneuvers last time, this week we also wrote rejoining to the convoy part. Both leaving and rejoining maneuvers are preprogrammed and in the all tests they worked as expected without any problem. We have combined external leave the line command with the leaving maneuver so that now our vehicle is able to detect the external command and leave the line while following the mock-up robot in front. The robot is also able to detect the last signal and rejoin the convoy after performing leave the line maneuver. More visual information can be obtained from the video link below. (OJO Design, 2018)

Solar panel sensor.

We have added red filter on the solar panel sensor to filter out sunlight, but our sensor fails to detect the laser beam under direct sunlight. We are planning to decrease the solar panel area and use different orientation for better performance.

References: OJO Design, (2018, March 31). First demo [Video file]. Retrieved from <https://www.youtube.com/watch?v=8eGR3QvXF0o>