EE 491 Senior Design Group Meeting

Safe Communication Between Lead and Following Vehicle

Week 1 Report

Team Members:

Bradley Stiff- Software Lead, Project Lead
Justin Wheeler- Software Lead
Sanguk Park- Scribe Lead, Communication Lead
Zhize Ma- Scribe Lead, Hardware Lead
Junho Chun- Hardware Lead
Yifan Lu- Hardware Lead
Jose Candelario- Project Lead, Communication Lead

This Week Accomplishments:

This week, we met with Dr. Chinmay Hegde to get a brief description on our project and what roles we will be playing throughout the semester. In our first meeting, we met with Vishal, our project director who gave us a brief presentation on how he views the progress of the project. This briefing was extremely general, but we did get a broad idea of how the project was going to be initiated. The presentation showed a diagram of the certain components which have not been decided yet, but had the overall roles each group had in the functionality of the car. It was clear from the first presentation that our group would have to split in roles that involved one half being responsible for the hardware functionality while the other half with software. We were not yet aware of the exact models of hardware we were using, but we did have a general idea of what we wanted to do with them. The overall design plan that our director, Vishal implemented is shown below:
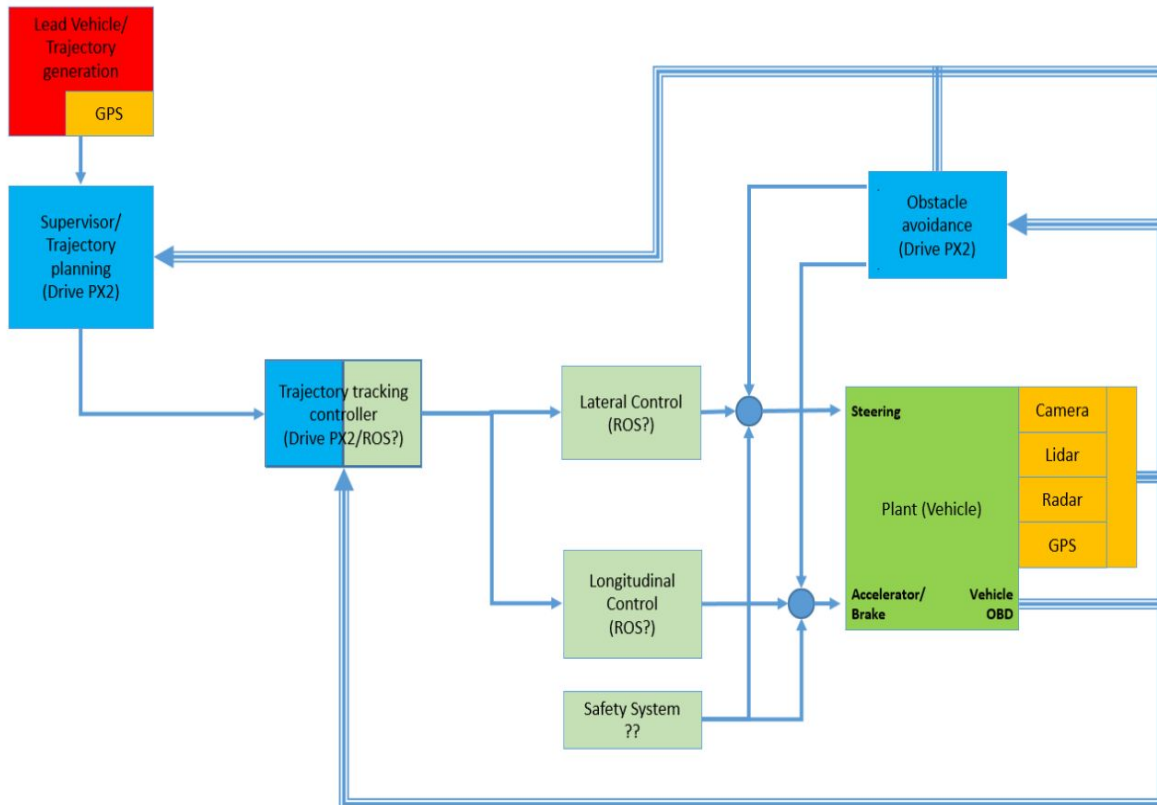
From this diagram, it was clear that ROS (Robot Operating System) would play a significant role in the functionality of the car. Currently we were unaware of what certain types of hardware would be available to us and how it would function throughout the car. Using this diagram, Vishal also told us he would like to divide this into roles which are shown below:

We were relieved to know that the electrical team would work components involving knowledge in our fields. Since this is only the first week, we were still unsure as to which portion of the diagram we would have to pay the most attention to. Overall we had the idea that connection of data between the different components will be a big lead as we will have to have to pay a lot of detail towards hardware specifications.

Vishal also went over more of the software aspects that were to be involved in this project. The software structure is shown roughly below:

Platform Architecture
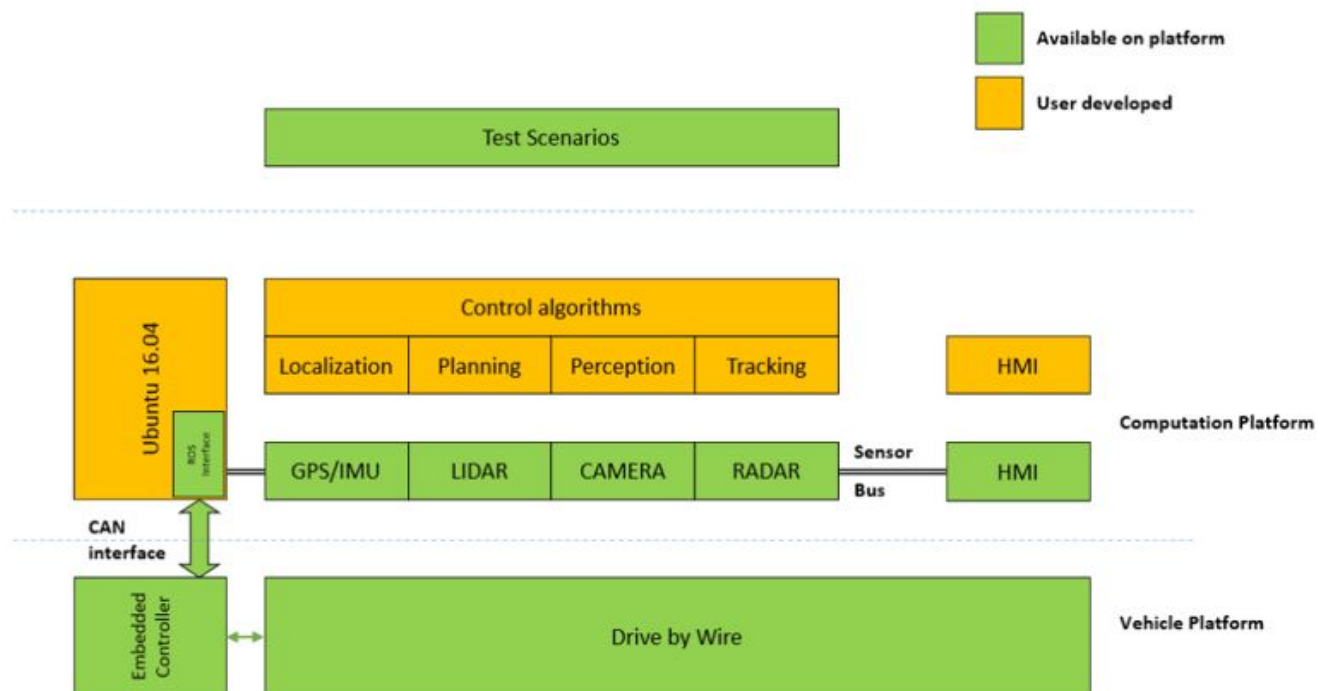
Overall, the briefing had a lot of information, but knowing the general idea of the project, we knew we needed to start creating roles for our members and start dividing up the work. The diagrams above are crucial in understanding our project as they were given to us by our client specifically to figure out what we need to focus on and at the same time to understand the larger picture.

Team Member	Contribution	Weekly Hours	Total Hours
Brad Stiff	Met team, and established roles. Helped set up team website.	4	4
Jose Candelario	Met with team started a description of the outline of what we were going to do throughout the project.	4	4
Junho Chun	Met with teammates and understood what we are going to do	4	4
Justin Wheeler	Met with teammates and went through the description of what the project was.	1	1
Sang Uk Park	Started to collect information and key features of each hardware that we will need when we power and implement it with the car.	6	6
Yifan Lu	Met with our advisor and client to discuss our goals and roles. Setting up plans as semester wise.	4	4
Zhize Ma	Met with team and advisor, basically understood our project.	3	3

Goals for Next Week

Decide the group member roles: Meeting Scribe, Meeting Facilitator, Chief Engineer-Power System, Test-Engineer, Report Manager

Decide on which specific parts we will work on for the project and start gathering key information to research ways to implement the powering methods for each device along with