sdmay19-04: Open-Source Prototyping of 5G Wireless Systems for Smart Ag, Autonomous Veh
Week 14 Report
February 16 - February 22

Team Members

Anthony Benson — *Chief Engineer: OAI Simulations*
Hye-Sung Moon — *Chief Engineer: Hardware Systems/SUMO Simulations, Client/Adviser Liaison*
Jaime Zetina — *Engineer: Hardware Systems Testing, Report Manager*
Jared Gorton — *Engineer: Software Systems Testing*
Khanh Luu — *Chief Engineer: SUMO Simulations, Client/Adviser Liaison*
Ted Miller — *Engineer: Software Systems Testing, Meeting Scribe*

Summary of Progress this Report

- We had our weekly meeting.
  - The OAI team discussed some of the methods they are contemplating to move forward in the designing of the new algorithm that encompasses the CPS and UCS algorithms for OAI integration. They have been working to understand the OAI code to find where they are able to make changes to support our goal of integrating the new algorithm into OAI.
  - We discussed shortcomings in the progress of the algorithm design, SUMO integration into OAI, and the preparation for the integration of the new algorithm into OAI.
  - SUMO has made progress importing Ames map and successfully simulated over 100 cars. The vehicle data for the simulated vehicles can be extracted, however we are moving in a different direction because we plan to run SUMO and OAI in parallel to achieve the mobile dynamics we need to test the new designed algorithm.
- We met with our adviser this week.
  - We discussed the groups concerns of falling behind on our scheduled tasks. Although we are working diligently, we are finding the project more difficult than anticipated.
  - We discussed the process of searching through the OAI code, and why we are not reaching our goals with the OAI code. The OAI research has rendered some results, however nothing concrete that can be used at this time.
  - We have made some progress with SUMO however still need to complete the big step of integrating it into OAI.
  - The algorithm design has not been completed and is scheduled to be completed early next week.

Pending Issues

- Understanding the OAI source code, OAI reference code, and beginning to manipulate it.
- New algorithm design
- SUMO integration into OAI for mobile dynamic data.

Plans for Upcoming Reporting Period
- Design new algorithm.
- Integrate SUMO.
- Find the location where to integrate the new algorithm into OAI.
- Begin writing a detailed report of the progress and the results of our efforts.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Anthony Benson	Worked on finding functions and structs that need to be modified for the OAI algorithm Discussed software structure with members of the OAI team	10	104
Hye-Sung Moon	Completed Importing map on SUMO. Completed generating vehicles for the simulation. Looked into a code to extract the data to integrate with OAI. Discussed what kind of data and format is required to interact with OAI.	20	176
Jaime Zetina	Worked alongside with Hye-Sung to complete the SUMO tasks. Map importation and simulation. vehicle data extraction from the simulation. Attended all group meetings.	15	163
Jared Gorton	Worked with Anthony, Ted, and Khanh to find functions and structs within OAI. Back tracked OAI simulation steps to find the start of the source code.	12	111
Khanh Luu	Backtracking OAI simulation steps to figure where the source code start. Using Atlas mapping to map the C source code to search for the start. Examine the OAI layer 1.	12	114
Ted Miller	Worked with Anthony, Jared, and Khanh to find functions and structs within OAI. Back tracked OAI simulation steps to find the start of the source code with in layer 1 of the code.	12	

Gitlab Activity Summary
Nothing to report.