sdmay19-04: Open-Source Prototyping of 5G Wireless Systems for Smart Ag, Autonomous Veh
Week 4 Report
September 25 - October 5

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/Advisor Liaison*
Ted Miller — *Engineer: Software Systems Testing, Meeting Scribe.*

Summary of Progress this Report
1) We have now finished reading the textbook 4g LTE-Advanced Pro and The Road to 5G.
    a. Each team member was assigned a section of the book to read and summarize for the rest of the team.
    b. Summaries have been uploaded to the team share drive for future accessibility.
2) We have made attempts to install Ubuntu in order to set the operating environment for OAI.
    a. We had an adverse result of reformatting one of the team members laptop.
    b. We are in the process of reviewing the process of installation.
    c. We now know we must set a virtual (virtual machine (VM)) environment within our laptop's operating system to house the Ubuntu.
    d. Varying VMs have presented installation issues and need to be solved.
3) SUMO installation has been put on hold until we are able to properly set the operating environment for OAI.
4) Each member has begun to read the publications (Physical Ratio K Scheduling (PRKS), Unified Cellular Scheduling (UCS), Cyber Physical Scheduling (CPS)) our adviser has shared with us as well as other material found online relevant to our project.
    a. We have gained knowledge regarding PRKS, UCS, CPS, Low latency wireless communication, and predictable reliability of inter-vehicle communications.
5) We are on track according to our milestone's layout and our project timeline.
6) The main focus of our effort thus far is to read and digest the information in the publications. The reasoning, we all have the basic understanding of the concept; however, we lack real background in the field of wireless communication.

Pending Issues
1) OAI software implementation has had a slow start, we may need to dedicate extra effort to this so that we stay on schedule with our timeline.
2) Consider requesting a VM from ETG to support the operating environment of the simulation software?
3) We have tried to install software on our devices but have not had success.
    a. We will need to troubleshoot this issue.

Plans for Upcoming Reporting Period

1) Solved installation issues.
2) Attempt tutorials of OAI.
3) Run OAI's "code"
4) Run base Simulation
5) Begin to derive an algorithm for our AV (UE)

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Anthony Benson	Anthony has preformed task including coordinating with Yuwei Xie for guidance using OAI. Has read assigned readings and presented summaries.	12	34
Hye-Sung Moon	Has researched the area of hardware implementation given software simulations. He has read assigned readings and presented summaries. Attempted to Install OAI over Ubuntu 14.04. Reading CPS paper and PRK paper.	15	49
Jaime Zetina	Has worked with hank to research the area of hardware implementation given software simulations. Jaime has maintained open communication with the Jared and hank to unify conceptual stage. Jaime has completed progress reports for the team. He has also read assigned readings and presented summaries. Have attempted to install required operating systems and supporting software.	13	45
Jared Gorton	Has worked in parallel with the OAI engineers to install simulation software and troubleshooting issues. Began researching SUM. Read Chapter 12 of LTE book and discussed earlier chapters within group. Worked lightning talk presentation.	10	30
Khanh Luu	Has coordinated with Anthony to meet with Yuwei Xie for guidance using OAI. He has	10	28

	read assigned readings and presented summaries. Continued to Reading CPS paper and PRK paper.		
Ted Miller	Has worked in concert with both Anthony and Khanh to ensure software understanding. Ted has facilitated meeting times, maintained meeting minutes, and has maintained record of important discussion topics in team meetings. He has also read assigned readings and presented summaries.	12	47

Gitlab Activity Summary

Nothing to report.