

sdmay19-04: Open-Source Prototyping of 5G Wireless Systems for Smart Ag, Autonomous Veh

Week 7 Report

October 27 - November 2

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

- 1) We are working to complete the OAI installations with the new software requirements.
 - a) We have cloned the repository of OAI, Installed features; EXMIMO Drive, USRP Driver, eNB+USRP, eNB+ETHERNET, Unitary L1 simulations, OASIM, OpenAirInterface System Emulation.
- 2) We have set meeting time with Yuwei to help navigate through the program. We have also began to run SUMO simulation software with Ubuntu to imported urban maps of Ames IA.
- 3) Our meetings have been geared towards to implementation of the PRKS and CPS over OAI. To do this we need to revisit the Unified cellular scheduling principles to begin building our code.

Pending Issues

- 1) OAI installation needs to be completed.
- 2) Algorithms need to be started.
- 3) Project Plan and Design Document need to be revised.
- 4) Presentation needs to be started.

Plans for Upcoming Reporting Period

- 1) Meet with Yuwei to complete OAI installation.
- 2) Run OIA simulations.
- 3) Start building algorithms.
- 4) Finish mapping SUMO for the desired area of Ames.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Anthony Benson	Read PRK and CPS papers Caught up on missed meeting by reading meeting minutes.	7	59
Hye-Sung Moon	Read PRK and CPS paper again thoroughly to implement the algorithm over OAI. After reading, we discussed with the professor about the paper and got a best understanding	15	88

	of materials. Retouched the project plan with specific hardware specification.		
Jaime Zetina	Uploaded latest version of our OAI machine to the share drive. Worked on OAI trying to interpret Forums to help us fix some of the issues with our version. Installed SUMO and currently trying load Ames Urban maps. Discusses CPS and PRKS publications with members of the group in regard to implementation of the algorithm.	14	84
Jared Gorton	Read PRKS & CPS papers. Continue installing OAI. Fix Ubuntu VM (issues with memory allocation/reallocation/version)	8	58
Khanh Luu	Work on OAI and try to solve the issue that we went into for the core dump. Manually, install Linux and dependencies, requirements component for OAI software to works and SUMO software. Read RPK and CPS paper.	10	60
Ted Miller	Worked on OAI some more specifically worked on the segmentation core dump error that we are running into. As a way to fix OAI issue started to look into different parts of OAI that were installed that we might not need. Along the same lines tried to trim down the size of OAI so we could have space for other things such as SUMO. Read the PRKS paper and talked to the adviser/client along with other members of the group about different elements of the paper. Started doing research into how to implement the CPS algorithm into OAI. Asked the client about how to create the CPS algorithm.	14	85

Gitlab Activity Summary

Nothing to report.

