

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

Week 2 Report

September 5 - September 12

Team Members

Anthony Benson — *software engineer*
Hye-Sung Moon — *client-adviser liaison*
Jaime Zetina — *report engineer*
Jared Gorton — *software engineer*
Khanh Luu — *client-adviser liaison*
Ted Miller — *meeting scribe*

Summary of Progress this Report

- 1) During this period, we have established a set of applications for consideration.
 - a. The prototype 5g network can be a suitable means of high reliability, low latency, and real time communication for unmanned aerial vehicle because (UAVs)
 - b. Autonomous Vehicles (AVs) because the realization of AVs replacing current vehicles depends on a reliable predictable and low latency for vehicle to vehicle communication
 - c. Augmented reality can benefit from a faster and more reliable 5g network
 - 2) The team has continued to read material covering the concepts and principles of wireless communication in the textbook “4G LTE Advanced Pro and The Road to 5G” (chapters one and two roughly 80 pages) and discussed the readings. In order to advance in the reading of the textbook, we have assigned chapters of the book to each member to summarize and briefly explain the material to the rest of the group.
 - 3) We further discussed the team roles but have not concluded at this time. We have completed the first round of lightning talks for the class activity.
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Pending Issues

- 1) We are presenting these ideas to our adviser during our meeting for feedback.
 - 2) The team will ask about the rest of the reading materials from the professor.
 - 3) We need to do more research towards OAI simulation software and SUMO software.
 - 4) Assign team roles.
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Plans for Upcoming Reporting Period

- 1) Have discussed ideas with professor and have narrowed our application to a more specific application.
 - 2) Have an overview of OAI and SUMO.
 - 3) Present summary of assigned reading.
 - 4) Begin to define Road Map.
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Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Anthony Benson	Discussed project with team and adviser. Talked about team roles. Started researching LTE/5G	8	16
Hye-Sung Moon	Read textbook chapter one and two. Summarize the LTE-5G book of chapter 3. Attended team meetings with the professor and team meeting with the group.	15	24
Jaime Zetina	Actively participated in meetings with adviser and team meetings. read chapter one and two from the text 4G LTE advanced pro and the road to 5G. prepared slides for lightning talks. Began to fill out project road map. have discussed our potential needs for software and hardware support with ETG. They can provide a VM to support our specific needs of ubuntu. They might have some hardware if the need arises. have reached out to PhD student Yuwei for support with OAI software.	10	19
Jared Gorton	Read Chapters 1 & 2 from LTE book and discussed with group. Begin to lay out project roadmap and understand expectations in greater detail. Begin to define team roles in the context of this project. Present Lightning Talk.	9	15
Khanh Luu	Project: Open Source of Prototyping of 5G Wireless Systems for Smart AG, Autonomous Vehicles and Beyond. Finalize group members. Meeting with Dr. Hongwie as advisor/ client.	6	11
Ted Miller	Went to several meetings with the adviser and talked about more details of the project. As a group we were given a text book and several papers to read. Started out by reading the first 2 chapters which amounted to about 80 pages. Did some additional research online.	11	20

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Gitlab Activity Summary

Nothing to report.
