

EE/CprE/SE 491 WEEKLY REPORT 01

9/5/17 – 9/8/17

Group number: 11

Project title: RFRD Phase II

Client &/Advisor: Dr. Daji Qiao and Dr. Nathan Niehart

Team Members/Role:

Bailey Akers - Facilitator/RFRD Tag Design/Fabrication Engineer

Colin Sunderman - RFRD Tag Design/Fabrication Engineer

Lyle Bishop - Principal Antenna Engineer

Pengyu Que - RFRD Tag Power Harvesting Engineer

Nathan Mulbrook - RFRD Wireless Communications Engineer

o Weekly Summary

9/6 - Assigned project scope, advisors, and team.

9/8 - Met with advisors Dr. Daji Qiao and Dr. Nathan Niehart. Discussed the scope of the project and determined our goals short and long term.

Short term goals for next week:

Read and understand the prior Phase I version for the RFRD design. Refresh ourselves with the theory behind measuring capacitance. Be ready to discuss relevant applications and designs for measuring capacitance for the next meeting scheduled for 9/15.

Long term goals for project:

Focus on IC design for RFRD Tag since our group is EE focused. The RFRD Tag will need to be analog technology due to cost constraints. Tag will need to be powered passively at any distance to prove the concept of wireless power harvesting. The Tag will need to be demo'd on a perfboard and printed on an integrated circuit (IC). We cannot demo circuit on breadboard due to capacitive coupling effects with these boards.

Focus on getting a functional antenna for our design. Do not spend much focus with the RFRD reader design.

We also met after the advisor meeting and collaborated as a team for assignment 1.

o Past week accomplishments

Last week we got our assigned project/advisors/teammates. Bailey set up the initial team meeting and advisor meeting. Nathan set up the group Slack account and calendar.

NAME	Individual Contributions	Hours This Week	Hours Cumulative
------	--------------------------	-----------------	------------------

Bailey Akers	Facilitated initial team and advisor meetings. Attended team and advisor meetings. Wrote weekly report.	6	6
Colin Sunderman	Attended team and advisor meetings. Edited weekly report.	5	5
Pengyu Qu	Attended advisor meeting.	3	3
Lyle Bishop	Attended advisor meeting.	3	3
Nathan Mulbrook	Attended advisor meeting. Set up team Slack account and calendar.	4	4

o Comments and extended discussion

o Plan for coming week

Team Member 1: Bailey Akers

Develop and present the 3 minute elevator speech. Research methods and current technologies related to measuring capacitance.

Team Member 2: Colin Sunderman

Develop and present the 1 minute elevator speech. Research methods and current technologies related to measuring capacitance

Team Member 3: Pengyu Qu

Research methods and current technologies related to measuring capacitance

Team Member 4: Lyle Bishop

Develop and present the 30 second elevator speech. Research methods and current technologies related to measuring capacitance

Team Member 5: Nathan Mulbrook

Research methods and current technologies related to measuring capacitance

o Summary of weekly advisor meeting

Description of weekly advisor meeting is above within the weekly summary section.

Grading criteria

Each weekly report is worth 10 points. Scores will be awarded as follows:

- 8 – 10: Progress for your project seems to be suitable. Documentation and hours reported by

team members are adequate.

- 6 – 8: There is scope of improvement both in your report and your project progress. Can consult with instructor/TA after class for further inputs.
- < 6: Please talk to instructors/TA after class hours about any difficulties that you/your team is facing.