

EE/CPRE/SE 491 WEEKLY REPORT 1

October 6 - October 13

Group number: 56

Project title: Sound Effect Devices for Musicians

Client &/ Advisor: Dr. Randy Geiger

Team members/role:

Dalton Sherratt: App programming

Eric Stablein: Signal processing, meeting facilitator

Zach Besta: Signal processing, meeting scribe

Weekly Summary

This week, the group's objective was to refine the sound effect device plan. Before this week, the group brainstormed and came up with several potential ideas. Then, using feedback from Drs. Geiger and Chen, the project scope was changed to a guitar-driven sampler app.

Past week accomplishments

Name	Individual contributions	Hours this week	Hours cumulative
Dalton Sherratt	<ul style="list-style-type: none">● Researched past 491 projects in the same category (sound modulation)<ul style="list-style-type: none">○ Found a project that is very similar to the target outcome of ours● Researched app UI	6	30
Eric Stablein	<ul style="list-style-type: none">● Researched MPC sampler for reference<ul style="list-style-type: none">○ Possible user interface○ Effects offered by current samplers	6	30
Zach Besta	<ul style="list-style-type: none">● Researched how the frequency resolution of the DFT depends on the number of samples<ul style="list-style-type: none">○ Found a formula relating the 2, but no testing was performed to verify it due to a change in project plans	6	30

Plans for the upcoming week

- Dalton Sherratt: researching app UIs and existing features of sampler apps

- Eric Stablein: research UIs and features of existing apps
- Zach Besta: research existing app features and envelope implementation

Summary of weekly advisor meeting (If applicable/optional)

- Dr. Geiger expressed interest in one of our ideas, a smart device app that would use eye tracking to control the volume of individual band members in a live music stream
 - Drs. Geiger and Chen brought up concerns about streaming and suggested focusing on a proof-of-concept using existing video
 - The group was concerned about the resolution of current eye tracking technology available on smart devices.
- Both Dr. Geiger and Dr. Chen wanted us to expand on the sampler pedal idea before discussing it further