

CprE 492

Date: 03/23/18 – 04/06/18

Team: 39

Title: Sound Effect Devices for Musicians

Advisers: Dr.Chen & Dr.Geiger

Team:

Tom Kimler – Team Lead

Virginia Boy – Power Lead

Ben Reichert – Test Lead

Dan Kroese – Embedded Lead

Garrett Mayer – Software Lead

Weekly Summary:

We gathered any additional data that was needed or missing from the data set. Additionally, we gathered data needed to demo our model on the song Ode To Joy. We remodeled the model to synchronize the waves, have only positive amplitude parameters, and confine phase shifts to $[-\pi, \pi]$. We tried to make a continuous model over frequency and amplitudes; however, we determined this may not be possible with the time and data constraints. We created the Ode To Joy song *vin* to demonstrate the models usage compared to a real tube amplifier. Lastly, we worked on the documents, poster, and final paper.

Past Two Weeks Accomplishments:

Data – Ben, Tom

- Gather additional data to fill any holes or missing data

Model – Garrett

- Remodeled model to synchronize waves start point. This was mean to get the phase shifts to be more comparative between data sets.
- Remodeled model to have only positive parameters for amplitude.
- Remodeled model to have only phase shifts between $[-\pi, \pi]$.
- Attempted to make a continuous model of amplitudes and phase shifts – however, this was aborted because it might not be possible with time and data constraints.
- Modeled the Ode To Joy in the model in preparation for the demo.

Song Creation – Dan

- Generating *vin* data to the song to test the model, which will later be presented at the presentation.

Documents, Poster, Presentation – Virginia, Dan, Tom, Garrett, Ben

- Worked on final presentation, poster, and paper.
- Got the layout ready for others to fill in necessary detail and complete sections that everyone knows how to do.
- Completed the posters necessary portions.
- Created graphs to be used on the poster, presentation, and paper.

Pending Issues:

Final Presentation/Paper – Everyone

- Need to polish it up and be ready for final presentation.

Individual Contributions:

Team Member	Contribution	Weekly Hours	Total Hours
Ben Reichert	Data, Documents	20	80
Tom Kimler	Data, Documents	20	85
Garrett Mayer	Model, Documents	20	83
Dan Kroese	Song, Documents	20	58
Virginia Boy	Documents	20	58

Comments:

N/A

Plan for Next Two Weeks:

Final Presentation/Paper – Everyone

- Need to polish it up and be ready for final presentation.

Summary with Advisors:

We looked at the parameters of the model and decided on remodeling the model to have only positive parameters for amplitude and limit the bounds on phase shift. Lastly, talked about how we are going to demonstrate our project to our panel. We decided on playing music to compare audibly, showing the spectrograms line up, and lastly a time wave analysis. We met up twice to go over one last revision of the poster before it was due – only small tweaks.