

EE / CprE / SE 491 – sdddec19-12

Campanile-Carillon Model Phase II

Jan 2019 – Dec 2019

Client: Dr. Tin-Shi Tam

Faculty Adviser: Dr. Gary Tuttle

Weekly Report 8

April 15 - April 19

Team Members

Ryan Roltgen – Software Engineering – Meeting Scribe

Sam Habel – Computer Engineering – Meeting Facilitator

Yicheng Hao – Electrical Engineering – Power Systems Lead

Gabriel Stackhouse – Software Engineering – Software Lead

Kienan Otto – Computer Engineering – Report Manager

Grant Mullen – Computer Engineering – Integration Manager

Weekly Summary

This week, we achieved a huge milestone in completing the Linux to Windows port that had been in progress for the past few weeks. Additionally, work began on implementing difficulty levels for musicians of varying skill levels. The user interface also underwent a major overhaul, most notably switching from horizontal to vertical bars, as well as changing the color scheme to better reflect Iowa State as the center of the project. Last, research was done on hardware and software options for the upcoming Info Board project.

Past Week Accomplishments

- Completed serial communications to the light bar for the Windows port, and worked on adding changes to the UI including vertical lines while playing to line up notes. - Gabe, Ryan
- Began adding a difficulty-adjustment feature to the tutorial for different skill levels to try. - Kienan
- Got access to frame and mechanical pieces of the model. - Grant, Sam, Gabe

Pending Issues

- New features like tempo control and PDF viewing still need to be added to the tutorial
- Additional visual enhancements will need to be made

Individual Contributions

Team Member	Contributions	Weekly Hours	Total Hours
Ryan	Worked on Windows port and replaced the horizontal scrolling lines with vertical bars to help line up the notes (makes it easier to understand which notes are white keys and which are black keys)	6	49
Sam	Worked on displaying sheet music in the application, looked into tablet options for display kiosk. Researched containment solutions for carillon components.	6	41
Yicheng	Soldered battery indicator circuit on perfboard. Made a video template of the program for simulation purpose.	7	44
Gabe	Rewrote the light bar serial connections for Windows, thereby completing the Windows port. Also worked on changing the color scheme and implementing other visual changes to the UI.	6	49
Kienan	Worked on adding difficulty-modifying features to tutorial for musicians of different skill levels to try.	4	38
Grant	Meet with ME team members to take a look at the carillon. Determined we would need an external enclosure for our power system. Researched how our BOM for our current parts list would work for an external waterproof enclosure.	5	41

Plans for the Upcoming Week

- Look into options for the standalone program to be with the carillon model
- Continue work on displaying sheet music as a PDF through the program.
- Begin adding more features to system now that the Windows port is complete.