EE / CprE / SE 491 – sddec19-12

Campanile-Carillon Model Phase II

Jan 2019 – Dec 2019

Client: Dr. Tin-Shi Tam

Faculty Adviser: Dr. Gary Tuttle

Team Members

Ryan Roltgen – Software Engineering – Meeting Scribe

Sam Habel – Computer Engineering – Meeting Facilitator

Yicheng Hao – Electrical Engineering – Power Systems Lead

Gabe Stackhouse – Software Engineering – Software Lead

Kienan Otto – Computer Engineering – Report Manager

Grant Mullen – Computer Engineering – Integration Manager

Weekly Summary

This week, our group spent time meeting with our adviser and client and finalizing our schedules with them. After discussing expectations with both, we are better able to decide on a plan of action and start working on our project plan. Outside of that, team members have been learning how the previous group was operating and what the goals of that group were.

Past Week Accomplishments

- Finalized meeting schedule with advisers – Team
- Looked into battery options – Yicheng
- Set up Trello board – Gabe
- Set up Gitlab repo – Gabe
- Set up existing code to run in Linux VM – Ryan/Gabe
    - Set up a test environment
    - Raspberry Pi is not needed to testing
- Decided on a project timeline – Team
    - Will be later than client requested
- Looked into hardware requirements for system – Kienan/Grant

- o Looked at Raspberry Pi and Arduino to determine usability
- o Researched power draw and requirement

Pending Issues

- Monitor needs ordered and will take ~8 weeks to arrive. This puts the project on a tight schedule.
  - o Touch screen would make a more compact and portable overall system as it would require fewer components to keep track of.
  - o A small keypad would be the simplest solution, so a touch screen wouldn't be necessary in that case.
- Existing code must be understood and fixed before we can really begin focusing on development of new features.
  - o Previous team working on this was 5xEE majors and 1xCprE major
- Space constraints within the campanile model may limit available battery solutions.
  - o Campanile will hold 27 bells and a smaller carillon
  - o Large batteries may be challenging to include inside structure

Individual Contributions

Team Member	Contributions	Weekly Hours	Total Hours
Ryan	Analyzed display options	6	6
Sam	Researched monitors	6	6
Yicheng	Researched battery options	5	5
Gabe	Arranged meetings with advisor, set up simulation for existing software	7	7
Kienan	Investigated hardware requirements for system	5	5
Grant	Researched power requirements for system	5	5

Plans for the Upcoming Week

- Order monitor – Team
  - o Meet with Dr. Tuttle and Dr. Tam together
- Begin work on power system – Yicheng/Grant
  - o Analyze space available in structure
  - o Decide on battery solution
- Begin debugging of code – Kienan/Ryan

- o Read through existing code
- o Refactor
- Analyze remaining demo code requirements – Gabe
  - o Decide what features still need implemented
- Create project plan – Team
  - o Work with Dr. Daniels to decide how to proceed with our project
- Fill out Trello board – Kienan/Gabe/Grant
  - o Set up software feature cards

Comments and Extended Discussion

We seem to be in a unique situation with our project. As we are continuing a project that was already well underway last year, we seem to be approaching the class differently. Our client wants us to have the already-functioning demo polished and complete before the end of the first semester, which is traditionally used as a planning phase for 492. Along with this, the previous group completed a lot of documentation about the direction this project is going. Unless our group disagrees and is willing to throw out some of this progress, then we already have the material to base our work on. For example, the project plan assignment is due in a few weeks, but we have the benefit that is all the previous group's documentation and work. Our plan has therefore already been decided. We feel as though the traditional approach to this class isn't easily applicable to our project.