

EE/CprE/SE 492 Bi-Weekly Report

10/12/2019 – 10/25/2019

Group Number: sddec19-23

Project Title: Network Arcade Platform

Client: Joseph Zambreno

Team Members:

- *Evan Mandle: Team Lead*
- *Alex Carpenter: Chief Engineer – Hardware*
- *Bryan Johnston: Chief Engineer – Software*
- *Alexander Schneider – Chief Design*
- *Zach Serritella – Meeting Facilitator*
- *Brian Shanders – Report Manager*

Bi-Weekly Summary:

During the two weeks, the team focused on finishing the construction of both cabinets, with display boards installed at the bottom. However, one of the top pieces on the second cabinet was cut wrong and needs to be adjusted before putting on. (Fig.1 [Note: the picture is what the finish construction will look like after the piece is readjusted]) The team also found a quote for vinyl decals for both cabinets, but need to figure out the specific dimension to get a proper price. For now, the quote is about \$400 total. The team is still waiting on glass panels to cover the display area.



Fig.1 Constructed Cabinets

Also, worked on getting a volume adjuster onto the cabinets to control sound from games. The team started to test a mechanical switching rig from the joystick to GameCube controllers using a holster and switch lever. (Fig.2)

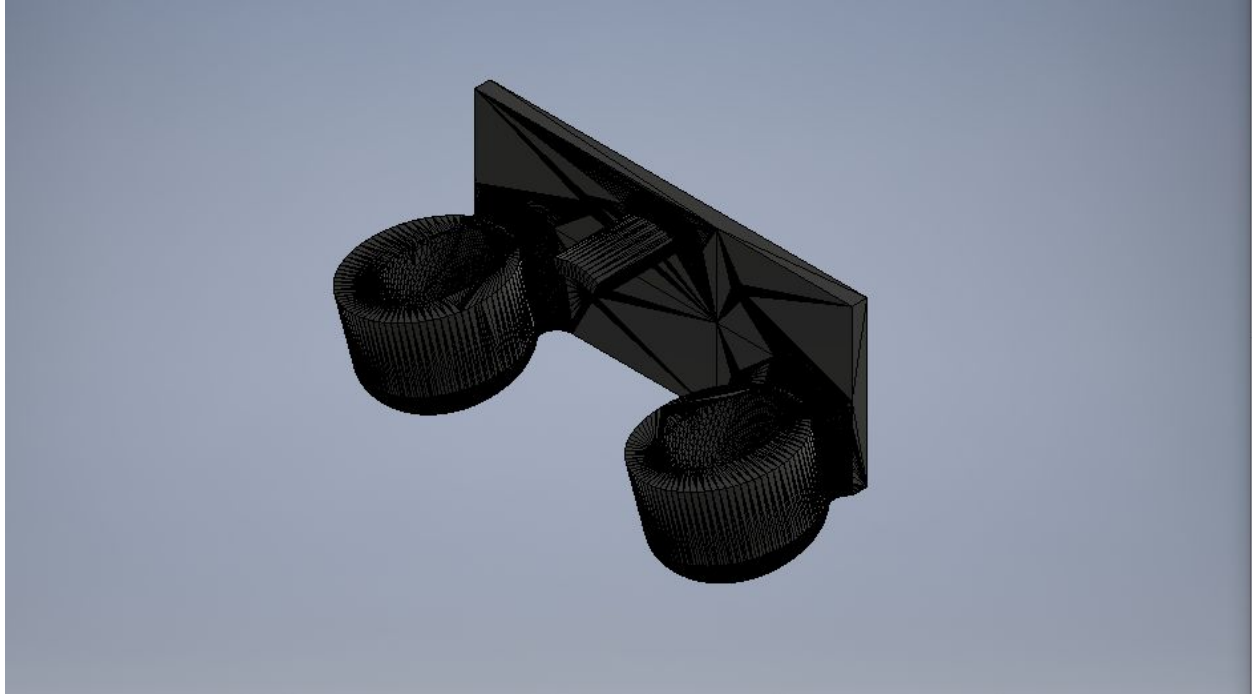


Fig.2 Controller Holster 3D Model

The systems were then updated to the current version of RetroPie and have working netplay with all the games in the library, along with the update to add Dreamcast games to the system.

The team also focused on the upcoming Peers/Instructor Review Meeting (PRIM) and worked on what issues to talk about and get feedback to solve them. This includes topics involving the switching of the two controllers, proper UPS testing, and what kind of sensors to use. Also, created new testing procedures for each aspect of the project.

Past Week Accomplishments:

- **Evan Mandle:** Work on researching a new potentiometer with a longer shaft so it can mount the volume knob. Help with finishing the second display board and made the stands to prop up the display board.
- **Alex Carpenter:** Worked on getting the uninterrupted power supply (UPS) setup. Assisted with construction on the second arcade machine. Tested controller switching during gameplay.
- **Bryan Johnston:** Finished construction of the second PC mounting board. Started working on a 3D printable mount for our console controls.
- **Alexander Schneider:** Designed functional and non-functional testing procedures, worked on PRIM slides with Brian S., assisted with construction, reviewed games library and compatibility, updated cabinets and evaluated netplay.

- **Zach Serritella:** Lead the finishing touches on the construction of the cabinet. Worked on the touch-up paint. Assisted with the second installation of the Tv. Installed the door hinges and security door hinges. Helped with UPS set up.
- **Brian Shanders:** Worked on PRIM slides and presentation, worked on writing Bi-Weekly report, assisted with installing speakers and top section in the second cabinet.

Pending Issues:

- **Evan Mandle:** Need to figure out a way to power on the machine easily.
- **Alex Carpenter:** Controller configuration and testing need to be finished for one cabinet.
- **Bryan Johnston:** Designing the wiring for powering the components that safe and looks appealing.
- **Alexander Schneider:** Tests are picking up once more and games compatibility must be reassessed with new firmware updates being required to force machines to be compatible. The current games list is unsatisfactory and despite most games functioning as intended, there is a very clear desire from our client for more.
- **Zach Serritella:** Configuration needs to be looked at and started to finalize and documentation needs to get started.
- **Brian Shanders:** Still unfamiliar with HTML commands and how to layout new areas on the front page of the website to add more information and make it more presentable. Also, collections still need to filter out the games that are not working

Individual contributions:

Name	Individual Contributions	Hours these past weeks	Cumulative Hours
Evan Mandle	*See past weeks accomplishments	10	150
Alex Carpenter	*See past weeks accomplishments	15	133
Bryan Johnston	*See past weeks accomplishments	8	46
Alexander Schneider	*See past weeks accomplishments	17	57
Zach Serritella	Painting, Construction, and Testing	19	69
Brian Shanders	*See past weeks accomplishments	10	55

Plans for the Upcoming Week:

- **Evan Mandle:** Order a new potentiometer and finalize volume control.
- **Alex Carpenter:** Continue with the configuration of controllers and testing controller switching during gameplay. Work on fine-tuning the first arcade machine.
- **Bryan Johnston:** Work on wiring, controller mounts, and finish the LEDs
- **Alexander Schneider:** Complete testing procedures, determine remaining netplay issues and begin streamlining RetroPie features to prepare the product for testing. Prepare for moving fully towards the documentation side of things.
- **Zach Serritella:** Testing and wiring of the system. Documentation of the manual and presentation.
- **Brian Shanders:** Start working on the final layout of the team website, assist in testing and any documentation. Finish fine-tuning PRIM slides.

Summary of Weekly Advisor Meetings:

Week 1: The team met with the advisor and gave an update on the project. This included the status with the near-completed construction of the cabinets, UPS installment, audio lever installment, and finding a place to make decals. The advisor suggested for the audio controls to be on the back of the machine and was ok with either a rotator or button. Also, said that the battery priority is low for now, but it is good to keep on notice. Finally, wanted to see the netplay as soon as possible to see and suggested to use a direct cable to connect to avoid an asynchronous start.

Week 2: The team did not have a weekly meeting with the advisor, due to prior obligations.