

EE/CprE/SE 492 Bi-Weekly Report

09/02/2019 – 09/13/2019

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:

Before the Fall semester started, the team worked on finalizing the main structure of the cabinet and send it an expert to help cut the pieces so the team can construct the cabinet. When the semester started, the team assigned tasks to each member and a set goal to complete them. Afterward, the team worked on filtering the games by the number of players, worked on creating netplay between the two computers, and continued to get certain games running on RetroPie. Also, worked on the hardware aspect with testing the joystick and Gamecube controls.

Past Two Week Accomplishments:

- **Evan Mandle:** Started construction of the cabinets. Work to get Daphne working through Emulationstation. Researched power management options. Research GPU's for the system.
- **Alex Carpenter:** Started construction of the cabinets over the summer. Worked on programming the teensy board to switch between multiple controller inputs even while playing games.
- **Bryan Johnston:** Researched computer deconstruction and various motherboard mounting options. Researched addressable LEDs: programming and power usage. Ordered some parts for the project.
- **Alexander Schneider:** Worked on debugging and management of the second computer. Tested and successfully launched netplay. Ran diagnostics and tested and successfully utilized additional controllers.

- **Zach Serritella:** Worked on games allocation from the first machine to the second machine. Helped with the construction of the skeleton and ordered the parts needed for the project.
- **Brian Shanders:** Worked on and researched filtering games into collections on both computers based on the number of players, along with creating custom thumbnails for each since the system only displays the name. Also, assisted in netplay with Alex S.

Pending Issues:

- **Evan Mandle:** Daphne is close to working but not quite there yet. Need to work with Zamberno to finish up daphne.
- **Alex Carpenter:** Multiple controller functionality. Waiting on parts to finish the construction of the cabinet.
- **Bryan Johnston:** Waiting on parts to arrive.
- **Alexander Schneider:** Netplay testing is extremely fickle due to constant changes in the machines. Need to settle the details of the second machine as soon as possible to ensure netplay will work on the final product.
- **Zach Serritella:** Wiring up the arcade from the guts of the computer and make it look nice. Also finding a place that has a reasonable price for the design of the cabinets.
- **Brian Shanders:** If any games are added into the computers, the collections need to be updated manually.
- **Team:** The person the team had hired to work on the wood frame of the game cabinet had delays and still hasn't finished it.

Individual contributions:

Name	Individual Contributions	Hours for the past 2 weeks	Cumulative Hours
Evan Mandle	See past two weeks accomplishments	120 (includes summer hours)	120
Alex Carpenter	See past two weeks accomplishments	95 (includes summer hours)	95
Bryan Johnston	See past two weeks accomplishments	6	6
Alexander Schneider	Netplay testing, controller testing + diagnostics. Computer debugging and management.	13	13
Zach Serritella	Helped with construction. Game allocation and helped	12	12

	with filtering of games. Presentation work		
Brian Shanders	Researched on netplay and game filtering on RetroPie. Implement filtering on both computers. Creating custom thumbnails. Assist in netplay. Writing Bi-Weekly Report	15	15

Plans for the Upcoming Two Weeks:

- **Evan Mandle:** Order GPU's and finish construction of the cabinets.
- **Alex Carpenter:** Finish construction of the cabinets and continue working and testing switching between two controller inputs.
- **Bryan Johnston:** Create a custom LED program for lighting effects then wire the LEDs to the cabinet. Deconstruct the computer and install the motherboard onto the cabinet.
- **Alexander Schneider:** Allocate the rest of the games library and finish setting up the second machine to get back into rigorous netplay testing. If possible, assist with the hardware construction.
- **Zach Serritella:** Worked on next meeting agenda. Hopefully, the cabinet pieces will be done soon to assist in construction and wiring.
- **Brian Shanders:** Work on documentation on game filtering and assist more in netplay. Also, work on the wire arrangement of the cabinet if possible.

Summary of Weekly Advisor Meetings:

First week: The team gave an update to the advisor about certain issues with controllers and connections with displays. For the displays, the advisor recommended researching a new GPU, since the two computers don't have an HDMI connection, or new displays to make the connection. As for the controllers, specifically with the teensy board, check the input refresh rates on RetroPie to see if it is high enough to use them. Finally, the advisor suggested a push button to switch between controllers from the joystick to USB controllers.

Second week: Did not meet with the advisor on the second week as the advisor was out of town.