

sdmay19-25: Handheld Emulation Station

Semester 2 Week 8

4/1 - 4/5

Team Members

Jacob Nachman — *Meeting Facilitator*

Nick Lang — *Meeting Scribe*

Nic Losby — *Chief Engineer*

Sean Hinchee — *Test Engineer*

Matthew Kirpes — *Report Manager*

Summary of Progress this Report

We demoed what we currently have to our faculty advisor and client Dr. Rursch to get a status update on her thoughts of the current prototype. Got a new power circuit to the hardware. Got ready for SDL and GPU design and integration.

Pending Issues

GPU functionality, Screen renderer, and printing our case.

Plans for Upcoming Reporting Period

Jacob Nachman: Work with the team on the GPU and SDL integration.

Nic Losby: Integrate everything into the case and make any modifications as necessary.

Nick Lang: Help in designing GPU to complete the emulator.

Sean Hinchee: Assist in implementation of SDL screen. Time permitting, continue gpio module development.

Matthew Kirpes: Continue working on the gpu/ using SDL to display to the screen.

Past Week Accomplishment

Jacob Nachman: Got the CPU to cycle and verified that the CPU and memory integration worked as intended.

Nic Losby: Spent many hours debugging the PCB to conclude the LiPo IC has a different pinout from datasheet.

Nick Lang: Created cartridge ram storing and loading as well as helping with integration.

Sean Hinchee: Expanded tests and proposed series of changes for emulator internal design.

Matthew Kirpes: Implemented clock and ROMB into the memory bank controllers 3 and 5.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Jacob Nachman	Cleared the project main method in order to make room for new SDL integration coming up. Moved cycling methods into a new place as	17	91

	well as added opcode function map to the CPU structure. Read about, set up, and practiced working with the golang SDL library we are using.		
Nick Lang	Created system of storing the ram onto a cartridge to be loaded later if needed. Also helped with integration of cpu accessing memory of gb and cartridge.	15	82
Nic Losby	Ordered and integrated a power circuit from Adafruit in order to meet the deadline.	8	84
Sean Hinchee	Continued expanding tests, made a tool for examining cartridge roms for gb systems, assisted in debugging and refining emulator.	18	100
Matthew Kirpes	Worked on displaying images as well as continue on the gpu.	10	71