

**sdmay19-25: Handheld Emulation Station**

Week 8 Report

11/5 - 11/9

**Team Members**Jacob Nachman — *Meeting Facilitator*Nick Lang — *Meeting Scribe*Nic Losby — *Chief Engineer*Sean Hinchee — *Test Engineer*Matthew Kirpes — *Report Manager*

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**Summary of Progress this Report**

With the first iteration of our PCB being finished, everyone is working on fleshing out smaller details for the project or getting details ready for 492 prototype development phase. That prep includes finalizing notes and details on emulators, kernel module info, and getting everyone on the same page with all of the info we have collected throughout the major research phase of this semester.

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**Pending Issues (might change this to not talk about the presentation)**

Lab testing with our PCB, gather our info, decide what we want to present in our faculty design/client presentation and start collaborating on the final presentation for the faculty panel.

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**Plans for Upcoming Reporting Period**

Jacob Nachman: Finish up the TinkerCAD project for the dock, decide how I want to connect the ports from the dock male component to the female output, and possibly start on attempt on emulating the CPU commands.

Sean Hinchee: Lay the infrastructure in place for building the kernel module and emulator source within Gitlab.

Nick Lang: Look into rsync to google drive to backup users data.

Matthew Kirpes: Get started working on an emulator for us to possibly use.

Nic Losby: Talk to ETG to get the other components ordered and solder at least one board most of the way.

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**Past Week Accomplishment**

Jacob Nachman: Made some progress on learning TinkerCAD and got a rough draft of the docking station up and running. Noted down all of the commands for the Gameboy CPU from the manual.

Sean Hinchee: Studied Cinoop documentation and made progress on designing an emulator.

Nick Lang: Looked into specifications and documentation for game boy advance.

Matthew Kirpes: Gained useful information from other emulator examples and guides.

Nic Losby: Got traces added to the PCB and components ordered.

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**Individual Contributions**

<b>Team Member</b>	<b>Contribution</b>	<b>Weekly Hours</b>	<b>Total Hours</b>
Jacob Nachman	<ul style="list-style-type: none"><li>• Worked on the first design of our dock using TinkerCAD, an online CAD software, had to learn the CAD software on top of doing the design.</li></ul>	7.5	54.5
Nick Lang	<ul style="list-style-type: none"><li>• Looked into specifications and documentation for game boy advance.</li></ul>	6.5	51
Nic Losby	<ul style="list-style-type: none"><li>• Added traces to everything and ordered PCB and components.</li><li>• Needed to find an equivalent part due to one we planned on using a few weeks ago going out of stock.</li></ul>	8	57.5
Sean Hinchee	<ul style="list-style-type: none"><li>• Discussed emulator strategy and design</li><li>• Continued learning about implementing kernel modules and the intricacies involved with various kernel interfaces</li></ul>	7	53
Matthew Kirpes	<ul style="list-style-type: none"><li>• Instruction fetch&gt;decode&gt; execute is largely important for emulators</li><li>• Discussed with other team members where and how we want to move forward with emulation</li><li>• Looked at some information from University of Cambridge</li></ul>	8	55

**Gitlab Activity Summary**

Nothing to report.

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