
Latent Damage and Reliability in Semiconductor Devices

Advisor: Dr. Randall Geiger**Client:** Dr. Randall Geiger, EcpE**Members (roles):**

Sean Santella (Leader)

Jaehyuk Han (Webmaster)

Hayle Olson (Communication Leader)

David Ackerman (Key Concept Holder)

Weekly Summary:

This week we met with our team on two different occasions. We have found it is beneficial to meet more than once a week. During these meetings we discovered a few discrepancies in the designs of the burn-in PCBs. We also met with our Advisor where he brought a few other issues to our attention. Throughout the week we worked to fix the issues and troubleshoot the burn-in board.

Meeting Notes:Team Meeting (Nov. 2nd at 3PM in Coover 2011)*Duration:* 2 Hours*Members Present:* Sean Santella, Jaehyuk Han, Hayle Olson, David Ackerman*Notes:* This team meeting was held to solder and experiment with the electric fencer. We also experimented with the functionality of the resistor arrays that are on the Burn-in PCBs. We discovered an issue with the Burn-in PCBs. The resistor array isn't functioning as expected.Advisor/Client Meeting (Nov. 4th at 9AM in Coover 2205)*Duration:* 1 Hour*Members Present:* Dr. Geiger, Sean Santella, Hayle Olson, David Ackerman*Notes:* This meeting was held with Dr. Geiger. He helped us to recognize a problem with our resistor string for our electric fencer. The resistors are looped too close and there could be a jump from one end to the other. It was also brought to our attention that the electric fencer did not have the power output that we had originally thought. With that being said, we also need to reconfigure the amount of impedance/resistance we have in our r-string. Additionally, we discussed how we are in the process of creating a schematic for the burn-in PCBs that we were given.

Team Meeting (Nov. 4th at 5PM in Coover 1313)

Duration: 1 Hour

Members Present: Sean Santella, Jaehyuk Han, Hayle Olson, David Ackerman

Notes: This team meeting was held to gather our thoughts in regards to our project plan and what we needed to revise. We also discussed some issues that Dr. Geiger brought up about the resistor string we had created.

Weekly Accomplishments:

- We gained access to the 3rd VLSI Lab as well as the lab that has the burn-in oven.
- We purchased new resistors that we will use to recreate our resistor string.

Plans for Next Week:

- Finish revising our Project Plan.
- Recreate our resistor string correctly and successfully integrate the electric fencer with our stress PCB
- Finish schematics for the Burn-in PCB

Pending Issues:

- We are currently waiting on some resistors to arrive through the parts shop.
- We are questioning the functionality of the Burn-in PCBs.

Individual Contributions:

Sean Santella: Attended lecture and weekly Advisor/team meetings, worked on revising the project plan, worked on soldering the electric fencer and resistor string, researched correct resistors, and fixed website issues.

Jaehyuk Han: Attended lecture and weekly team meetings.

Hayle Olson: Attended lecture and weekly Advisor/team meetings, worked on soldering the resistor string, and wrote weekly report.

David Ackerman: Attended lecture and weekly Advisor/team meetings, and worked on revising the project plan.

Hourly Contributions:

<u>Member:</u>	<u>Weekly Hours:</u>	<u>Total Hours:</u>
Sean Santella	11.0	42.5
Jaehyuk Han	4.0	29.0
Hayle Olson	7.0	35.0
David Ackerman	5.5	32.5

Semester Total: 138.5 Hours