

EE/CprE/SE 491 Bi WEEKLY REPORT 1

8/29/21 – 9/16/22

Group number: 17

Project title: Bitcoin Mining Asic

Client &/Advisor: Prof. Duwe / Prof. Duwe

Team Members/Role:

Dawood Ghauri / Design Workflow

Constantine Mantas / Team Organization Leader

Soma Szabo / Component Design

Courtney Violett / Testing

- **Weekly Summary**

Project design was finalized over the summer. However, when we were going through the finalization process we found that our initial design wouldn't fit in the user project area. We decided to go with a simulation of the bitcoin mining process that would be able to fit in the area we were provided. We found the necessary IP, and are well into the process of integrating it into the chip.

- **Past weeks accomplishments**

Shifted high level design to have simulated version of bitcoin mining with a SHA 1 hasher.

Found the necessary SHA IP to use in the design as well as creating the other necessary components.

Integrated a large amount of the components into the chip along with testing each of the integrated components as we are going along.

- Dawood: Worked on high level design to adjust for SHA 1
- Soma: Worked on integrating SHA 1 hasher into high level design
- Constantine: Found and selected SHA 1 IP and designed testing to ensure functionality
- Courtney: Readjusting testing for high level design to take into account new hasher

○ **Individual contributions**

<u>NAME</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Constantine Mantas	7	75
Courtney Violet	6	71
Dawood Ghauri	7	75
Soma Szabo	7	82

○ **Plans for the upcoming week**

- Constantine Mantas: Reorganize documentation for new design and to be ready for MPW shuttle 7. Ensure materials are ready to be passed along to next Senior Design team as they get started.
- Courtney Violet: Ensuring the rest of the minor components are integrated and functioning correctly
- Dawood Ghauri: Ensure design works as expected before the SHA 1 is fully integrated.
- Soma Szabo: Finish integrating SHA 1 into high level design and ensure that it is passing local testing.
- Team: Work with the new Senior Design ASIC team to bring them up to speed on what we have learned about ASIC design and what resources may be helpful to them.