

EE/CprE/SE 492 Bi WEEKLY REPORT 3

10/12/21 – 10/25/22

Group number: 17

Project title: Bitcoin Mining ASIC

Client & Advisor: Prof. Duwe

Team Members/Role:

- ***Dawood Ghauri / Design Workflow***
- ***Constantine Mantas / Team Organization Leader***
- ***Soma Szabo / Component Design***
- ***Courtney Violet / Testing***

○ **Bi-Weekly Summary**

These past two weeks, we started work on creating firmware tests for proper simulation of the project both in virtualized environments and on-chip (pending review and acceptance from eFables). This includes gate-level simulations and using the OpenSSL C++ libraries to create tests. Additionally, we worked on getting the new senior design team up to speed with the caravel user environment and establishing a proper workflow for their project.

○ **Past weeks accomplishments**

1. Created consolidated shared resources for the new senior design team to use which includes one of our earlier test designs (a basic adder).
2. Successfully hardened and simulated design for basic adder for demo to new senior design team. Held question/answer sessions.
3. Started creating firmware tests using OpenSSL C++ libraries.

- Dawood: Helped work on SHA1 firmware tests and assisted the new team with Linux workflow.
- Soma: Worked on firmware tests and integrating OpenSSL with our SHA1 module. Continued work on gate level simulations.
- Constantine: Organized the meeting, helped lead the answering of questions, and helped with setting up dev environments for the next group. Worked on firmware tests.
- Courtney: Helped work on SHA1 firmware tests and assisted the new team with getting set up.

○ **Individual contributions**

<u>NAME</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Constantine Mantas	8	90
Courtney Violet	8	86
Dawood Ghauri	8	90
Soma Szabo	8	97

○ **Plans for the upcoming week**

- Constantine Mantas: Continue working on firmware tests and assisting new team with any questions they might have.
- Courtney Violet: Continue working on firmware tests with a focus on SHA1 integration.
- Dawood Ghauri: Assist new team with any workflow issues that may arise and continue work on firmware tests.
- Soma Szabo: Work on gate level simulations (with hardened design) and continue work on firmware tests.
- Team: Continue work on creating the firmware and programs needed to simulate the design working. Continue working with the following team and answering any questions that have about the design process.