Team Name: sddec21-02
Team Members:
    Matthew Dwyer
    Prince Tshombe
    Cody Tomkins
    Spencer Davis
    Braedon Giblin
Report Period: March 29 - April 12

Summary of Progress in this Period

- Further investigated libremote-port to understand the implementation
  - Extracted prototypes of data packets and helper functions
  - Began creating C++ test application to create sockets for SystemC to connect to
  - Began debugging QEMU communication
- Design Doc v2 revised and submitted to Canvas and Client for further review prior to the final version
- Lightning talk about technical challenges created and recorded
- Identified IMU for emulation use in SystemC and QEMU
  - Driver found to include into build root (BNO055 I2C IMU)
  - Exploring interfacing with the driver for the IMU for a test application
- Worked on compiling Linux kernel module and learning how to include kernel module in Buildroot build
- Successful implementation of a SystemC state machine running a bare-metal driver on the front end.
- Finished first draft of Documentation of Co-simulation Device Demo, currently testing functionality of the documentation.

Pending Issues

- Compiling the driver into Buildroot is straight forward yet lengthy
- Example libremote-port packets have still not been captured as of yet
- Simulation of multiple devices in SystemC still in progress and the ideation phase
- Learning how to use Linux kernel modules

Plans for Upcoming Reporting Period

- Prepare a demo of a test application creating a socket for SystemC to connect to
- Connect a SystemC instance to both a QEMU and simulated application in parallel
  - Perform a correct handshake
  - Transfer data Read
  - Possibly perform writes (bi-directional)
- Write a C program that uses the BNO055 driver to read serial numbers off device chips
- Send Documentation of Co-simulation Demo to the open-source community for inspection/merging to the repository.

Weekly Hours Worked

Team Member	Hours Worked (Both weeks combined, 8 hours are team huddles)
Matthew Dwyer	14
Prince Tshombe	8
Cody Tomkins	10
Spencer Davis	8
Braedon Giblin	12