

Team Name: sddec21-proj07

Team Members: Sterling Huling, Taylor Weil, Parker Larsen, Sean Griffen

Report Period: April 12 – April 23

Summary of Progress in this Period

- Software worked on implementing Zigbee firmware demos on the two developer boards provided by TI to show proofs of concepts for Zigbee communication, as well as implementing serial communication between the Beaglebone and dev boards.
 - Hardware continued work on the initial PCB design, finalizing debug buttons/LEDs and other I/O to be controlled by the cape's on-board microcontroller, as well as decals. A schematic review is planned later this week and after that, the hope is to get the board manufactured as soon as possible.
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Pending Issues

- For software, figuring out how to properly implement SPI and I2C on the Beaglebone has been challenging, as well as getting UART to work consistently on our ZigBee development boards.
 - For hardware, finding correct replacement parts for out-of-stock items has been challenging.
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Plans for Upcoming Reporting Period

- For software, communicating to a Zigbee tag/sensor board with the Beaglebone over a protocol like I2C, or SPI.
 - For software, working through more complex Zigbee demos and adapting them for our purposes.
 - For software, start the work on requirements for our Zigbee library, and required components on the Beaglebone platform.
 - For hardware, finish the cape schematic and complete serial connections.
 - For hardware, finish work on the PCB decals.
 - For hardware, review the PCB layout and complete the first prototype. Send to manufacturing afterwards
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