Senior Design Progress Report

|  |  |  |  |
| --- | --- | --- | --- |
| **Student**: | Brian Dye | **Team**: | 20 ENIGMA |
| **Semester**: | Spring 2022 | **Position**: | Team Leader |
| **Week**: | **16** | **Hours**: | 35 |

# Progress

This week was spent getting ready for the Spark Challenge. Most of my time was spent integrating each component to work together. I ensured that packet data was flowing through our system correctly. Packet data needs to transmit properly over UART, be processed by the STM32 for routing and forwarding, and be modulated using the RFM69. My team and I debugged the radio module. We ran into the issue of not sending and receiving consistently. We determined the cause was due to the trace to the SMA connector not being big enough to accommodate the signal strength. We fixed it with a fly wire. I personally ran into the issue of integrating the UART commands. Before the final presentation, I’m thinking about creating simpler commands for the front end to communicate with the back end. Instead, of sending “get+bat” or “get+ft” I think what would be easier would be sending a number that is associated with a functionality instead of sending a string that is associated with a functionality.

# Case

I developed the strategy for mounting the PCB inside the case. Here is the final result and my team and I at the Spark Challenge:

A group of people sitting at a table with laptops and papers

Description automatically generated with low confidence