* **Longevity Issue:** Even if we successfully implemented the mesh network, we believe that it would be a hassle for people to fix the XBees if they are not familiar with XBee devices or the DigiMesh network. Each of our XBees behaved differently despite being flashed with the same code, and the hardware seems damaged
* **Router ENOTCONN error:** The coordinator device can determine the presence of multiple routers, but the routers have trouble staying connected to the network. This creates unreliable data transmissions and is an issue that popped up very late in our design process and doesn’t seem to make sense based on our code. ENOTCONN specifically means that the program had timed out or that a device has disconnected from the network
* **Hanging from hopping:** Having multiple routers cause all nodes to hang in transmission, leaving the coordinator unable to get data from any other router. This sometimes results in an OSERROR being thrown. OSERROR is just a generic transmission error code and does not provide any further information
* **Battery power vs microUSB power:** Sometimes, we got different transmission error codes depending on which of these power sources were used
* **Pycharm:** Pycharm was quite finicky. We both used the 2022 community version, but it was never able to open Digi projects on one of our laptops. This meant that one of us had to create a new Digi project every time Pycharm had to be reopened. Also, Pycharm sometimes had to be restarted as it would occasionally not recognize new XBee nodes attached to laptops

Overall, we got very close to implementing a working Digimesh. We just had to integrate all the communication pieces (Pico->XBee, XBee->XBee, Pico->SD card) together.

However, our hardware seemed to get internally damaged in an unobvious way towards the end of this process. In response, we kept retesting older versions and individual modules of code that were previously shown to work, but even those older modules no longer continued to work. **If this mesh design is to be revisited, then we suggest:**

1. **Measuring power changes during XBee transmissions and attempting to find fluctuations when XBees try to communicate with each other.** The Raspberry Pi Picos seem fine, but the XBees have some unobvious malfunctioning issue.
2. **Retrieving the field sensors.** We did not order these, so you will likely have to contact Dr. Eisenstadt and his IoT4Ag associates about these. However, all the ADC code is setup for them so hooking them up should be easy.
3. **Test each of our code modules individually.** Specifically, test XBee->XBee, XBee->Pico, Pico->XBee, Pico->SD card, 3+ XBees, and then the whole system together.
   1. If you run into massive problems, try to contact Digi. Dr. Eisenstadt got plenty of documents and resources from NeoCortec by endorsing university usage of products, and maybe Digi could do the same.
   2. Dr. McNair teaches Wireless and Mobile Networks (a class that uses XBees in labs). Maybe she can provide some tips.
4. **Maybe buy new XBees in case yours are already damaged**