1/16/2024 – Dr. Rojas was unavailable for an in-person meeting during the class session. Project vision was discussed and decided on for submission by tonight: “

1/18/2024 – Further planned out goals for this semester, looking for new satellite/antenna

1/23/2024 – We missed an email from Rojas on Thursday/Friday last week, and he went to Texas and cancelled another meeting. More searching for compatible satellite/antenna combo. Discussed backlog and slight updates to product vision

1/25/2024 – Current goals are to meet with Rojas after he gets back and choose a compatible satellite and antenna combo to run past Rojas and get the pieces ordered. We are expecting/hoping for delivery of parts in early March. Contingency: work with old tracking station to further test tracking software and learn to use SDR. If possible, start development of a feed for the new antenna -> what info do we need to design the feed?

1/30/2024 – Team worked with JT and got approval to work in the upstairs lab instead of having to go to the micaplex. The parts there will be the contingency plan until the selected parts can be ordered and shipped assuming we follow through with that plan. We also got a much more specific design plan for the antenna to gui chain process, and overall and a very clear direction for the project

2/1/2024 – More research on SDR capabilities and looking for an appropriate satellite, discussion of team jobs and work on the backlog.

2/6/2024 – Moved parts for the previous team’s ground station from Micaplex to Lehman building for use/testing during capstone meetings. Half of the team worked on documentation, other half was looking into the steps necessary to develop the feed which will contain a polarization converter, a bandpass filter for our desired transmission frequency, and an amplifier before being sent to the SDR. Small scale tests with the antenna will likely need to be performed to determine the power loss and other necessary parameters for the link budget.

2/8/2024 – Presentations

2/13/2024 – I was sick and missed class

2/15/2024 – Half the team went to the micaplex to get more parts and spoke with JT, the other half was stuck in the classroom waiting for more than half the class for Akbas to chitchat with every group. I found the datasheet for the mesh antenna, and though it has a higher gain, it is only either linear or horizontally polarized, making it less reliable for this project. The old team’s ground station was partially assembled in the microwave lab in Lehman, and further testing is being planned, and the RF block design is being researched. I asked about the feasibility of developing the entire RF block in one piece rather than 3 separate sections to avoid loss at connectors, but this would be unrealistic given our limited time, skill, and resources. As it stands currently, I don’t know how we are expected to improve the project using essentially the same parts that weren’t able to receive a signal, but at least we have parts to try and work with. I really want to make note of the fact that we could have been working with these parts since last semester, and I really feel like I’m not getting as much as I wish I could be out of this class as a result of unreasonable expectations.