Plan to make drawing diagrams for each scenario listed below and how the packets will be send from one entity to another on a timeline.

1. GS sends the intercept command to the OBC (0x??).
2. OBC sends the acquired command to GS (0x??).
3. *Optional telemetry information exchange*
4. GS sends request data command (0x??).
5. OBC receives the request packet and acts on it.
6. OBC turns on SDR power GPIO H2-3 (SDR_EN).
7. OBC waits 20ish seconds for SDR to power on.
8. OBC asks for SDR power status (0x??).
9. SDR replies to OBC with power status (0x??).
    a. If OBC does not receive SDR power status within timeout allotment, OBC sends SDR transmission error command to GS and process stops (0x??).
10. *Optional setting SDR time*
    a. During payload mode the time is set on the SDR so files are named with their recording time, this may not be needed if we are just reading and transferring the files.
11. OBC asks SDR to transfer data files (0x??).
12. OBC enters packet relay mode between SDR and GS.
13. SDR sends file start command (0x??) with the file name as the payload to GS.
14. GS creates a new file with the same file name as the packet payload.
15. SDR reads file line by line packaging each line into a packet and sending it to GS.
    a. Could also package file contents into a buffer and send multiple lines in one packet. Quality of life improvement possibly.
    b. Each line is 4 info bytes and if we append \r\n to each that makes data transmission 6 bytes per line. If the CySat packet payload is a total of 128 bytes (possibly 256 or some amount) then a packet can hold about 21 lines of the file.
16. At the end of the file the SDR sends an end of file command (0x??) to GS.
17. When the GS receives the end of file command it closes the opened file.
18. GS then replies to SDR with file received command (0x??).
19. SDR then deletes the file that GS confirmed it received.
20. Process starts again with SDR sending the file start packet to the GS.
21. This process loops until all the files have been sent and or connection is dropped.
    a. If GS does not reply to one of the end of file commands then the file is not deleted and connection to the GS is assumed to have been dropped.
    b. SDR sends the communication dropped command to the OBC (0x??)
22. If GS connection is not dropped SDR sends an “end of file list” command to GS (0x??).
23. GS will end its file receive loop when the “end of file list” command received.
24. GS command sequence will continue to any secondary commands or quit if none are set in the sequence.