Lab visit report

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1 Initial objectives

1. get my computer setup for all sdrs with gnu radio
2. plan the rest of the internship
3. make a python script to estimate the time for specific scenario (SF, #Dev, #frames,..)
4. lora communication with 2 MKR1310
5. plot the lora communication to see the Chirps
6. read Lora Gnu SDR implementation

2 Material and software used

- arduino MKR1310
- USRP SDR
- pluto SDR
- cable communication

3 Summary

morning : 1, 2 points done afternoon : 3,4, (5,6)

I installed all the necessary dependencies for every SDR.

Made the python script

4 Problems encountered

cmake dependencies connecting a pluto sdr with the same usb hub as an arduino MKR1310 messes up the arduino alimentation

5 Solutions found

check for cmake dep connecting the pluto sdr and the arduino on different ports

6 Conclusion

Tommorow : test with 1 sdr and 1 transmitter the minimum interval needed between 2 frames for the receiver to detect them correctly to get an estimation of the time between 2 frames needed (check the frequenty in arduino ide and how to detect a frame connect with different ports)

memo : settled on sending frames each transmitter at a time and cycle until all frames per device are sent