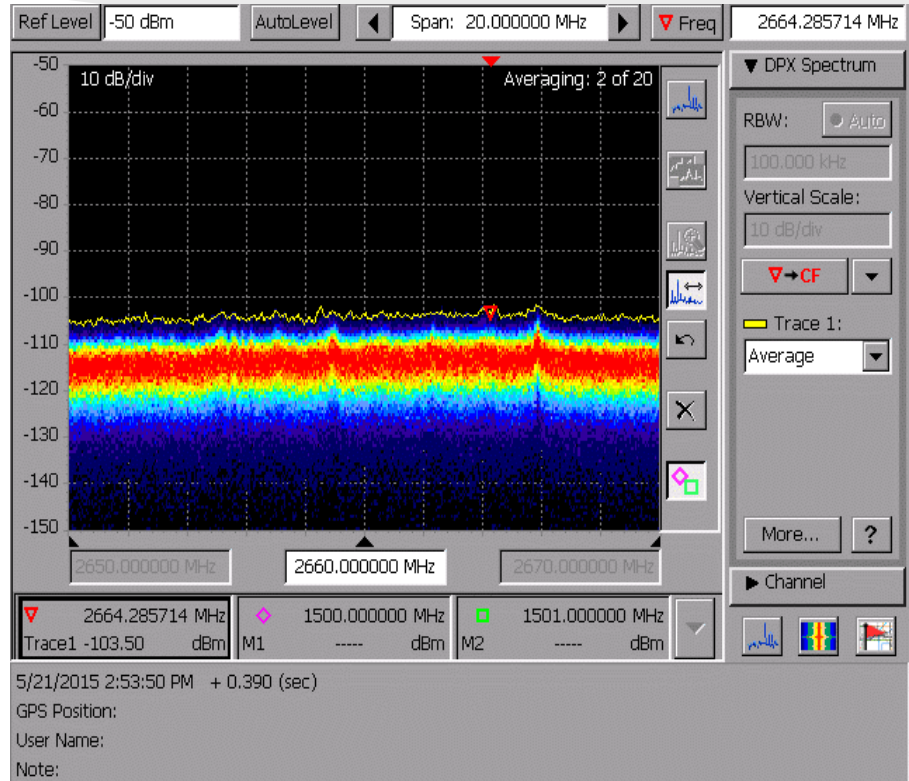


SDR in ORBIT: LTE-U

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Spectrum Analyzer

- Learned to work with spectrum analyzer
- Gives a good visual to what is being transmitted on which frequency.



OpenAirInterface (OAI)

- Using the image oai-trunk-full.ndz to set up LTE basestation on ORBIT
- Setup for transmission but haven't received signals

```
Setting eNB buffer to all-RX
[HW][I][SCHED] eNB TX thread 0 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 0 started on CPU 2
[HW][I][SCHED] eNB TX thread 1 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 1 started on CPU 1
[HW][I][SCHED] eNB TX thread 2 started on CPU 2
[HW][I][SCHED][eNB] eNB RX thread 2 started on CPU 1
[HW][I][SCHED] eNB TX thread 3 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 3 started on CPU 2
[HW][I][SCHED] eNB TX thread 4 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 4 started on CPU 1
[HW][I][SCHED] eNB TX thread 5 started on CPU 2
[HW][I][SCHED][eNB] eNB RX thread 5 started on CPU 1
[HW][I][SCHED][eNB] eNB TX thread 6 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 6 started on CPU 2
[HW][I][SCHED] eNB TX thread 7 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 7 started on CPU 1
[HW][I][SCHED] eNB TX thread 8 started on CPU 2
[HW][I][SCHED][eNB] eNB RX thread 8 started on CPU 1
[HW][I][SCHED] eNB TX thread 9 started on CPU 1
[HW][I][SCHED][eNB] eNB RX thread 9 started on CPU 2
Creating main eNB_thread
[SCHED][eNB] Started eNB main thread on CPU 1
eNB_thread: mlockall in ...
eNB_thread: mlockall out ...
waiting for sync (eNB_thread)
TYPE <CTRL-C> TO TERMINATE
```

This week

- Generated single frequency wave and obtained I/Q samples and I/Q plot
- Transmit LTE signal from base station on ORBIT
- Learned about WiFi protocols

Next Week

- Obtain I/Q samples from LTE basestation
- Obtain time, frequency and waterfall plots from I/Q samples
- Practice with spectrum analyzer