

Senior Design Project
T307
26 February 2021
Advisor Meeting 3.0

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SECTION I: Advisor Meeting

The meetings with our Advisor as agreed in the first meeting which was not documented will be conducted upon notice or bi-weekly.

1.1: Meeting Agenda

The following contains the agenda of the second meeting:

- (1) Intro / Greeting
- (2) Current Updates / Recent Discoveries
- (3) Questions / Advice
- (4) Future Updates
- (5) Conclusion

1.1: Meeting Notes

The following includes the notes taken during the meeting:

Meeting with Dr. Arora 2/26/21

Emil (Updates)

- Able to receive and view signal with Simulink Time Scope, but not in proper domain.
- MATLAB/Simulink may not be the best software due to the processing power needed.
- Trying to access the ADC to perform a DAC to get raw data.
- Possibly reprogramming SDR
- Looking into IIO Oscilloscope as a substitute software.
- Still able to capture, play, and display signal, just need voltage versus time.

Questions/Advice

- Arora: What toolboxes are in use? DSP and Adalm Pluto SDR Toolboxes.
- Arora: Are you using an FFT? No
- Team: Do you know of anyway to display signal in different domain than received by SDR? No
- Arora: What are the current problems related to new display of signal? How to Math-wise take out voltage versus time from power vs time.
- Team: In the physical world, how do you hook up spectrum analyzer to oscilloscope to display voltage vs time? Have certain RF signal at known frequency. All you can really do is rectify it and get a DC output. Analog to digitize signal, that signal is not going to have any information.
- Team: How is the frequency related to sampling rate if sampling rate is 11 MSPS and frequency is 600 MHz? Sampling rate is the number of samples per second. Multiply number of seconds passed by the frequency in hertz to get the number of samples.

Future Updates

- Live testing with function generators and oscilloscopes.
- Will practice with the new software to determine whether the team will stick with the MATLAB or go to IIO Oscilloscope.
- Looking into programming on the FPGA

Conclusion

- Will inform him on next meeting, no future date set yet.
- Going to send him links for all future presentations
- Want to meet in person by the end of the semester if it ever becomes available.

1.1: Meeting Minutes

The following table includes the meeting minutes thus far:

Table I: Meeting Minutes

Meeting Number	Minutes (m)	Date
1	60	15-Jan-21
2	30	29-Jan-21
3	60	26-Feb-21

Table 1: Meeting Minutes elements contained in this figure

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