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| **MEETING MINUTES – Sponsor Meeting** |
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| OWNER: Julia Kim |

Meeting with Pete Stenger 03/18/2015

Time: 5:15 p.m. – 6:00 p.m.

Present: Joshua Cushion, Patrick Delallana, Julia Kim, Benjamin Mock, Jasmine Vanderhorst

Ben updated Pete on the orders: the Home Depot should be in in a couple of days, he was waiting on Josh to see if he needed a op amp from Digikey but he didn’t so he placed the order for the new VCO eval today, and the Fairview stuff should be ordered tomorrow. Most of the orders were set for one week delivery except for the foam. Ben adjusted the foam quantity and sent that out to Donna today. The antenna structure should be done by tomorrow and Malcolm and Mark are going to pick it up. They haven’t mentioned any price increase for the structure.

Pete had in mind that Malcolm and Mark would work in parallel with the antenna structure and do all the mechanical structure while the components are being tested. Pete got approval to be here from April 1st to the 3rd. Pete asked if we gave the schedule for testing to CAPS and Jasmine confirmed that she sent out the schedule to them. Pete would like to see how the components in the lab before assembling everything together so he doesn’t want us to worry about rushing everything.

Matt, Josh, and Julia are going to divide up the testing in order to complete the tasks more efficiently. Pat will stick with the FPGA and will come together for the integration with the switches. Pete said that we would need to have the wiring for the components to be done, calculating the component box, and erecting the antennas. He expressed that for the box calculations, Malcolm and Mark would be in charge, and Mark would be in charge of erecting the antennas. Whether the power supplies from the lab are used or a board with multiple channels is used, the wiring would need to be done. He’d like all the wiring to be in place for when he comes at the beginning of April.

In terms of component mounting, Josh, Mark, and Malcolm will be doing so this upcoming Friday. Josh asked whether Pete had any suggestions for thermal paste to put under the components; however, Pete said that Malcolm and Mark should be responsible for finding what thermal paste is appropriate and acquire it.

Pete asked whether we would continue testing on the test bench without the detector and using the equipment, and we would be starting to do so. Pete said we would need the detector to look at the pulse characteristics. Once we verify with the spectrum analyzer, it would need to be hooked back to verify the pulse fidelity. We don’t care about the voltage at the peak; instead of the rise and fall times using the scope. We are aiming to get a clean square with few curves. He said we could use a pulse generator to drive the SPDT switch, and ideally drive it with a 20ns wide pulse. However, if it’s not possible, then a wider pulse, like 40 or 50 ns, to verify how it’s working.

Pete doesn’t think each component should be tested individually as it should be working as it should. He said that the components should be cascaded and look at the data and look at what is occurring. We care about end-to-end and that is what we should be concentrating on.

The power amplifier has its own power supply, and the power for the transmit section is different from the receive part. The second low noise amplifier and the IQ demodulator should have a different power supply as well. When we’re transmitting, we don’t want to be receiving anything. So if things are connected to the same supply, then there may be leakage that spills over in an undesired manner, so we should avoid that.

Pete is planning on coming to campus from April 1st to the 3rd in order to assist with the last details for the project.