

Meeting Minutes

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Client

March 2, 2018 2:00pm-2:30pm

Agenda Notes/Status Reports

Status: We received the computer and started working on an Ethernet protocol on it, using TCP. We are starting small and see what we can do with it. We plan to stream Ethernet packets to the computer and then work on after the design streams the ADC outputs into memory. A similar reference design using the KC705 is the DAQ2, which we will be combining with the FMCADC4 design in order to capture the EM signal. Captured signals assuming a full 1GB of memory at 14bits is ~500,000,000 samples which corresponds to ~0.5 seconds, of which we estimate we will only need half of.

We proceeded to review the February Monthly Status Report. Some key concerns we need to address:

- * Need to determine how antenna design will impact attenuation of specific frequencies.
- * Build FPGA design to verify captures, using UART or similar to verify.
- * Determine detectability of types of modifications and single instructions once capture design is complete.

For the antenna design, we have simulated a potential design and how it compares to that of the probes. We plan to do more exploring on the positioning as well.

For the algorithm, we plan on working on alignment and user options and algorithm usability. We also plan to explore fine tuning the algorithm to make it more robust against different environments.

Key Decisions

* Expo date: April 27th, 10:20AM, Pitman Center 2nd Floor

* Use EthernetLite for data streaming

Action Items

* Team: Produce table of groupings of instructions of what we can and cannot distinguish from.

* Team: Build and verify FPGA design.

* Team: Confirm antenna specifications and determine attenuation of particular frequencies.

* Team: Determine throughput of Ethernet connection.

* Team: Send client EXPO info. (listed above)