

Meeting Minutes

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Client

November 29, 2017 3:30pm-4:15pm

Agenda Notes/Status Report

Status: The team presented a short update on the current project status.

Matt Covalt discussed requirements involved with choosing an ADC and FMC to PCIE connector.

An ADC is needed that has one channel with 12 bits of resolution and 200 megasamples per second.

Sampling at a rate of 200 megasamples per second enables the collection of samples at a nanosecond range, which

makes it possible to record the maximum amplitude of the peaks being measured.

The client has a bunch of tooling built around oscilloscopes with the impressive capability of sampling at a rate of 20 gigasamples.

Other points discussed include the fact that the team would be over budget if we bought both the FMC/PCIE along with the ADC that we want.

We are making progress on the algorithm side. Matt Waltz obtained results from tests and ran data through cross correlation code.

The output is a percentage describing how one wave form compares with another.

The client suggested an idea for characterizing instructions. Instead of cross correlating

a series of single points representing individual instructions, he suggested

looking at a series of windows of 20-30 instructions around each peak.

This would be accomplished by comparing that window against the entire capture of the bootup sequence by applying cross correlation.

We plan to test this idea in our code.

We will meet next week (Dec. 6). Agenda items include discussing monthly status report feedback and plans for next semester

as well as any other thoughts before everyone adjourns for Christmas break. This will be the final meeting of the semester.

Key Decisions

- * Key Decision: The client will discuss what equipment they have available (FMCI/PCIE and ADC) and acquire appropriate hardware for our setup.
- * Key Decision: The team will include answers to questions from PDR and questions regarding our acquisition of devices in the Monthly Status Report.
- * Key Decision: We will meet next week on Wednesday, December 6.

Action Items

- * Team: Put answered PDR questions and data and requirements pertaining to acquisition of equipment (FMCI/PCIE and ADC) in the Monthly Status Report, which will be delivered Friday, December 1.
- * Client: Discuss what equipment they have available (FMCI/PCIE and ADC) and acquire appropriate devices for our setup.