

Monthly Meeting (April 2021)

Date: April 27, 2021
Time: 2:00 pm - 2:55 pm EST
Location: Park Seismic Office
Attendees:

In the office: Choon Park and Jin Park
Via Skype: Josefin Starkhammar and Nils Ryden

- Admin:
 - Norrfee Tech (NT)'s travel plan not clear at this moment, so they want to leave only a minimal amount for travel and use the labor budget if travel needs more budget.
 - Josefin proposes to adjust labor hours between her and Nils in Task #1, #2, and #3.
 - Nils proposed to leave budget for three (3) items in the future; a bicycle rack, a 12-V car battery, and an AC power converter. The total estimation is \$500.
 - Josefin proposed a possible additional budget of \$300 for the remaining circuit boards.
- Technical:
 - Choon presented topics on hardware by using a power-point file.
 - He discussed the quality of the data from the 1st JFT in February and commented it was a highly favorable quality that leaves room for further amplification by reducing measurement voltage. He mentioned it would be critical for the proper design of the 2D system to cover simultaneously as much laterally wide area as possible. Josefin and Nils responded with pros and cons for each possibility.
 - Choon showed the results of GPS data from the JFT and commented that its accuracy needs to be improved. Josefin and Nils commented they think it should be possible because the same device produced more accurate data previously. They will check this issue before the next field test.
 - Choon showed the temperature data commenting it shows rather abrupt changes here and there, indicating a possible link to the GPS issue. Josefin and Nils commented it might show the reality because the temperature may change abruptly depending on a shady or shining area. Nils also commented the device might not be able to tell a slight temperature difference smaller than 1 degree in Celsius.
 - Choon and Josefin briefly discussed the file naming convention for TDMS files.
 - Choon discussed how important expanding the shot offset (X1) is to expand the lateral width of the 2D array. He proposed the 2D arrays to have separation as far apart as 1 ft, which requires X to be longer than 0.5 m. Nils commented that, currently, the optimum X1 is only 0.15 m. Choon proposed to increase it by increasing impact power. Nils commented he would perform field tests for that. Choon also proposed to test a 1D array-oriented perpendicular to the moving direction for the purpose of 2D array design. Nils also commented he would perform field tests for that.

- Nils commented we have to be more conservative in extending the shot point distance (X1) because it can be the only parameter that can make the entire data quality suffer from low S/N at any time. All agreed we should be.
- Choon discussed the plan for another presentation at NRRA online meeting on May 18. Choon and Nils will exchange draft versions of presentation files at the earliest time of convenience.
- Agreed:
 - Jin will send a draft budget plan before the next meeting.
 - Norrfee Tech will perform field tests for GPS and source characteristics.
 - Choon and Nils will exchange draft presentation files at the earliest time of convenience before May 18.