

## Correlator implementation and control meeting

April 26, 2012, 11.00, Arpad's room

participating: Jonathan, Salvatore, Harro, Aard, Arpad

Actions from last meeting:

- Harro: get in touch with Gino and discuss the VDIF packet size the DBBC will produce
- Jonathan: show correlation plots to Sergei, ask for input, sanity checks
- Jonathan: write up how exactly a correlation job is to be started up on uniboard. Harro and Des will use this as input for the code that will have to interface between a (the?) GUI and the uniboard. eBob will need to be involved.

Not exactly an action, but Harro will start thinking about and maybe working on a new version of j2ms2. This will not use a vex file but the database via JSON.

Although the next meeting was supposed to be in 2 weeks, I just realized I will be in Manchester Tuesday to Friday in that week and I will have to pack the stuff in my room on Monday (moving Friday). So, the next meeting will be

-Jonathan starts with describing the current state of affairs. Attempting to use one set of delay parameters and insert that into data stream. Found one problem, needs a re-write of some code, will be done in next few days.

action 1: Harro found out from Gino that packet size is selectable. Discussion ensued about fixed size in UB correlator. Right now 5000 Bytes. One packet per row in memory. Suggestion to put smaller packets in same row, at column boundaries. Harro suggests this in fact is not needed, should be back to back. Just a matter of bookkeeping after all... Jonathan agrees this is a better system, every station could have its own packet size (now need to re-size). But will keep this for later, corr functionality is now highest priority.

action 2: not done, did send email, Sergei is on vacation. \*\*\*Action stays\*\*\*

action 3: Jonathan actually started work on this. Lengthy discussion

follows, concerning delay parameters, what they are, how they are calculated, integration times, FFT intervals, whether multiples of them should fit within whole second. Meeting was suspended just before the canteen closed, taken up again at around 15.30.

It is unclear where the idea comes from that integer number of integrations should fit exactly within one second. Easier to specify an integration time, translate that into nearest number of FFTs, use that. Implications for the design though. Jonathan needs to think, we'll further discuss this next week, when Des is back from vacation.

Jonathan and Harro will start thinking about list of error conditions for each station that should be stored in some register.

Harro did start some work on j2ms2, is convinced that acsii vex file should be generated from database anyway, instead of using json, to keep working same as now.

Next meeting: Thursday May 3, 13.00, Arpads room