Minutes from the meeting of: Thursday June 7 2012
Present: Jonathan, Salvatore, Des, Harro

Action items of last meeting
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Jonathan: uploading of documents to the wiki not done yet, still no wiki account. Harro will arrange for someone to get him one.

Jonathan/Salvatore: updating the output packet header not done because of its low priority. We'll keep the item pro memori.

Jonathan/Salvatore: the MATLAB code for interpreting and plotting the data is working

Des: didn't see Dmitry so wasn't discussed. He will email him.

Harro: asked Arpad about space VLBI. No space VLBI was mentioned in the UniBoard proposal, it's up to ourselves. To a certain point of course; there's politics involved. For the moment the decision is: *if* there is space VLBI data (from RadioAstron) we'll do it with SFXC. Note that this is different from spacecraft tracking.

Individual updates
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Jonathan/Salvatore: had a chat with Sergei last week about the mixer + FFT in the system. This proved to be extremely insightfull and immediately realized an error in the design. Sergei's formulae were hard-copied and changed into a MATLAB model of the mixer + FFT. This allows easy simulation with synthetic data and is used now to verify the VHDL version of these components. This process so far already uncovered a bug (which was fixed).
It was suggested that this hard-copy of the design of mixer+FFT also be uploaded to the wiki.

Discussing the benefits of these documents all thought it would be good to encourage writing (smallish) documents and upload them to the wiki.

During testing of sending correlated data from multiple backnodes at the same time it seems that a significant number of packets get lost. Several reasons were thought of: four 10Gbps senders sending at the same time over four different links which get sent to a single 1Gbps interface or Erlang is too slow to keep up. Requires investigation (action harro).

Jonathan asks if it is desirable to have less spectral points. It would make timing a lot easier and also allow more bandwidth to be processed. The answer is that yes, there will be requests for lower spectral resolution, maybe as little as 32 frequency bins.
The 1024 frequency points at current is probably the highest we need to do with UniBoard.

Another issue discussed was validity bits. Jonathan remarks that they're expensive to store/transport throughout the system. We discussed multiple options (per FFT period, per sample) but concluded to discuss with SFXC to learn how they treat the validity bits in order to come up with a meaningfull number.

Des: uploaded his document on the wiki. Given that not a lot of model parameters are needed at this point used his time on higher priority issue.

Harro: because of conference in Sweden and high priority issue (same as Des') nothing was done on Bob's data processing.

Action items
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Harro: chase up people to get Jonathan a wiki account
all: write up documentation and upload to wiki
Harro: investigate packet loss from uniboard -> data-to-disk writer

pro memori: Jonathan/Salvatore: update output data packet header with 8-bit FPGA nod

e-id
and possible >1 bit correlation engine id. Update documentation and put on the memoseries wiki.

Next meeting
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The date of the next meeting is June 14th, immediately after JIVE coffee.