Correlator implementation and control meeting

April 5 2012, my room

present: Jonathan, Salvatore, Jintao, Harro, Des, Arpad

- Jonathan: currently: 2, 4 or 8 bits data accepted. 1 bit not implemented but prepared. 2 Pols in 1 packet
Packet length is taken to be 5000 Bytes. May have to have different versions of firmware to accept different packet sizes, could be problem. 8192 "normal" jumbo, VDIF does not specify size. Unknown what DBBC will put out.
action Harro write Gino and ask what his plan is with respect to frame size.
Recorded data in principle no problem, can be re-framed.
Bugs removed, cross and auto correlations now do not show dip anymore.
action Jonathan show correlations to Sergei, ask him for input, ways to further test, sanity checks

Delay model is in the design. Getting ready for real test. Des has provided delay calculations. Same assumptions wrt accuracy as MarkIV correlator. Provide numbers on same timescale as integration time, that is, if every 1/32th of a second, make integration time multiple of 1/32th of a second. May have to be 1/64th of a second though.

Extensive discussion on multiple phase centres. Will probably be necessary to use second uniboard for this, as there is simply not enough onboard memory available. IO certainly no problem between two uniboards. Not quite relevant right now. After his PhD defense Jintao will start work on pulsar gating/binning. Gating probably will fit easily in FN, binning may be a problem. Also of later concern.

How to start up correlation? Harro and Des do not know, but undoubtedly the uniboard correlator will be fired up from the same (type of) GUI as all the others. Bit between GUI and uniboard still does not exist.
action Jonathan write up how one should start up correlation with uniboard. Harro and Des will start thinking of implementations and involve eBob at that point.

Output of correlator. Need new version of j2ms2. Should not be dependent on vex file, but instead use database via json. Harro will start looking into this.

Next meeting: not too far in the future, to keep development going. 2 weeks was suggested, but Arpad will be in Manchester. Next meeting

Thursday 26 April, 11.00