

Correlator implementation and control meeting

May 3, 2012, 1300, Arpad's room

participating: Jonathan, Harro, Des, Arpad

As Des was not present, we filled him in on the details of last meeting.

Des explained what exactly he was doing with the delay coefficients.

- results from CALC every 1 second
- Akima spline through those points
- evaluation of spline 32 times per second
- poly fit to these 32 points using 3 of the 32
- coefficients are sent to UB
- polynomial is evaluated every tick

We have now decided to make integration time an integral number of FTs. Des will fit a quadratic polynomial to one integration (up to one second) (using additional values of CALC 1sec before and after). Send coefficients over in batches, better too many than too few. Jonathan evaluates pols again every tick. Aard is quite convinced that there is no significant difference between Akima and quadratic pol. Hussein, some years ago, checked this.

action Des: figure out if this is true, with extreme range of frequencies and baselines (RadioAstron included). Will ask Giuseppe for info on space baselines.

Jonathan thought a bit more about the packing of data frames back to back in memory, will make thing easier. Hold off until later, for now continue with 5000 byte frames.

Some talk about registers for info and error handling. Version number of code, configuration number, BN or FN, data in wrong place (keep some VDIF headers for examination). Will continue to expand on document, send it to Harro and Des for iterations.

next meeting: Tuesday or Wednesday next week (May 8-9), time to be decided