12GeV Trigger meeting notes:

5-April-2013: C. Cuevas, N. Nganga, B. Raydo, J. Gu, S. Kaneta, B. Moffit, A. Somov

29-Mar-2013: C. Cuevas, N. Nganga, B. Raydo, J. Gu, S. Kaneta, B. Moffit, A. Somov

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1. Trigger/Clock/Sync – TI/TD

5-April-2013

→William has tested the production TS and has transferred this board to the EEL109 three crate global test stand.
→Testing continues in the EEL109 lab.
→Alex has one of the pre-production TS boards in F117 and William will retain one pre-production boards indefinitely for firmware development/testing.
→Dave Abbott will need a TS to proceed with the Hall D multi-crate testing. Several TD boards have been installed in the Hall D CH and fiber connections exist for linking the TD to TI. NO CTP are required for the testing in the Hall D CH.

29-Mar-2013

→Preproduction TS is still being used in the 3 crate global test station. It would be a good idea to use the production TS board as soon as possible to verify performance of the three crate system. Plan to move the production board today or next week.

1. *SUB-SYSTEM PROCESSOR (SSP)*

29-Mar-2013

→CTP to SSP fiber link firmware OK
→Diagnostics added to SSP for display readout of test results.
→SSP to GTP 5Gbps links are stable
→Acceptance testing for production units continues.

2. CUSTOMERS

29-Mar-2013

→At least 12 full crates have passed the FCAT station and have been moved to the Hall D counting house. D. Abbot et al. will begin the DAQ/CODA testing soon. Dave will need at least two TD and a TS to begin the counting house tests.

3. "B" Switch - Signal Distribution Module (SD)

29-Mar-2013

→Talk with Bob M. about an SD board. I think they can use a pre-production unit for their experiment.
→The SD→TI link is on the back-burner,,

4. System Diagrams/Fiber Optics

15-Mar-2013

→No action until cable trays are installed in the halls.

8-Mar-2013

→No report.

8-Feb-2013

→Patch panels and patch cables are being checked in now, and will be distributed to the hall groups
→START procurement for trunk cables in D and B by May??

5. Global Trigger & Trigger Distribution Testing

5-April-2013
→The three crate global trigger test station is providing good opportunity to verify the overall interaction between all the new trigger modules including verification of the input signals on the FADC250 boards.
→Measured overall latency is less than the absolute maximum value required by the F1TDC modules (3.9us). There are several methods to improve the overall latency so that we have a comfortable margin for trigger equation processing and any other miscellaneous 'features' that need to be added.
→The global trigger test stand includes production modules for TS, TD, TI, SSP, SD and FADC250. The GTP and CTP are pre-production prototypes, but are fully functional and variations from production units for timing and other critical performance parameters will have to be verified.
→Ben has circulated a document that lists several items that would be very useful for diagnostics and monitoring and these should be converted to 'requirements' for each of the boards in the system. In the present test stand configuration, it is difficult to identify why the system does not run or the status of the various Gigabit serial links in the system.

29-Mar-2013
→Procurement for GTP production units will be split into two orders. One order will be for the printed circuit board and one order will be for the assembly of the GTP. The split order will reduce the overall cost because a turn-key order from a single Contract Manufacturer is more expensive.
→GTP register map is closer to final draft
→Price quotations have been delivered from procurement. Scott is evaluating these quotes and will need to coordinate with the buyer.

20-JAN-2012 (Keep this date to reference full DAq crate procedure)
3-June-2011
→Successful testing with the two crates each with a single FADC250-V2, CTP, TI, SD and one SSP!!
16-July-2010 (Keep this note because it needs to be implemented and tested at some point) See older note dates for the list of items.

6. Crate Trigger Processor (CTP)

5-April-2013
→1st article bare board was inspected on Tuesday 9-April and there are very minor issues on several areas under the FPGA having to do with debris under solder mask and a few BGA pads.
→No change to the schedule for receiving the 1st assembly at this point.
→The production CTP acceptance tester board has been received and will be assembled at JLAB.

29-Mar-2013
→Cost increase was approved and layer stack-up verified. New delivery of 1st article is 29-April-2013.
→CTP acceptance test board is complete and ready for purchase. This board is <$1500 and is required to fully test the production CTP boards.

***ACTION ITEMS*: Next meeting - Friday 12 April 2013 @10AM in F226**