DRAO Upstairs Meeting Room IP Address: 192.139.21.207
Participant Teleconferencing Connection Details:
- Anywhere in North America: 1 866 261-6767 Passcode: 150167#
- Anywhere in the UK: 00-800-42783782 Passcode: 150167#

Hardware Update

1. Production – CPU Module
   A. Zhang looked through possible replacement modules
      a. Found one that may work and Amy is going to buy a sample for testing
      b. Amy getting a quote on replacing the Kontron modules also
   B. Brent/Ralph managed to get a picture of the gold hair problem and take a video of the loose pins on the connector.
      a. Going to send a module to Kontron along with the picture and video
   C. There are currently two options for dealing with this problem:
      a. Could replace all modules that could pose a problem
      b. Could buy a number of spares to replace as needed
   D. Loose pins could explain why there were intermittent problems which were fixed when boards were moved
   E. The possible replacement modules only have two connectors which are standard. Therefore may have to replace Ethernet and USB cables.
   F. Investigating if another type of soldering iron will work to see if this is an option so that we can possibly develop a procedure that is ~0.5h and a reliable process
   G. Ralph: Is it possible to get an uncleaned board?
      a. Michael: Kerry is still busy, but there are still some untested boards that Ray is looking at and can possibly take pictures of
      b. Brent: Would be best to send a second example for extra proof; one with a multiple hair problem
   H. Gary: Has each module been gone through and identified which has the loose pin problem?
      a. Ralph: Yes. Each has been examined.
   I. Gary: Have we talked to the appropriate person high enough up the chain at Kontron?
      a. Ralph: Talked with applications engineers and they are talking with Kontron in Germany
   J. Michael: Even if this issue is not resolved until late fall, it might not be a big problem for RSRO; more important to have working correlator
2. Production – Baseline Board testing
   A. Still working on repairs; going slow now that it is just one person in the lab
   B. Maybe 17 left to do

Round-table Updates

1. Dave F
   A. Talked with Dave about the CRM tests of the station board
   B. Looked at test vector sets. Think they are ok for a test of 2 antennae and cross-polarization and some calibration tones
   C. Wondered about removing edge requirements on some FPGAs
2. Sean
   A. How is CPCC after power failure problem? Any progress?
      a. Not much; Kevin is away with a family problem
3. Brent
   A. Visited eMERLIN correlator last week
      a. Would be good to release FPGA binaries to an ftp site on a weekly basis

       b.   Bruce: Won't probably do it weekly, will just do it as a major release to resolve issues
4. Sonja
   A. Away for most of last week therefore nothing really to report
5. Bruce
   A. Fixing bugs
   B. A lot of changes in baseline board to suppress error counts when configuration changes coming in
6. Martin
   A. Working with Michael to get configuration and scheduling working
7. Bryan
   A. Ordered 5 new CBE nodes today (brings current total up to 8 for RSRO)
   B. Brent: Do you know how many nodes will be needed for final system?
       a.   We think we will need 32 nodes in total, but haven't done enough testing yet to confirm
       b.   Will make final CBE node purchase in mid-winter or early next year
   C. Schedule:
       a.   2GHz RSRO from now until May 2011
       b.   Next configuration is 8GHz RSRO
   D. Has the Kontron issue impacted the end of April delivery date?
       a.   Yes, won't deliver until the issue is sorted out
8. Adam
   A. Will be in Charlottesville week after next
   B. Was away for about a week and a half
   C. Before went away: tested phased array with virtual Mark 5C to see if it can catch packets in proper order
       a.   In 2-bit mode: When pulled data, you see ~5% square wave which is what was expected
       b.   The logistics and mechanics of shipping data packets around seems to be working
   D. Brent: would like to test on narrow band source with large f-shift on one antenna
   E. Also want to get control of writing VCI documents and executor scripts
9. Michael
   A. Last week we had an unexpected power down on Tuesday and a planned power down on Wednesday, the recovery from both took a lot of time
       a.   Station board:
           i.   Came up with delay modules as inactive
           ii.   Deformatter software must all be restarted
       b.   Various boards came up as initialized only, vs. running/programmed
       c.   Crossbar boards had to be power cycled again
           i.   Didn't come up, wouldn't listen to commands, but data flowed through fine
           ii.   Brent: Could be a communication problem with Station boards
       d.   Baseline boards:
           i.   Had to run startup sequence manually
           ii.   Chips come up but won't talk to LTAs; requires manual reset
   B. Would like to do a lot of work on robustness of system when power cycling; will have to make this a priority eventually, no time currently
   C. Current issues:
       a.   Collecting as much OSRO data as possible
       b.   Want wideband going for RSRO
       c.   Robustness issues
   D. Management has pushed to get observing done, but now coming up as big discussion on what issues to sort out
   E. Observation selection committee meets next week
   F. Brent: Is it possible to have a 1 week block to test power robustness of system?

a. Michael: Yes, agreement in principle; management has to come to terms with fact that not as much observing can be done as scheduled
G. Sean: It might take less than a week or more than a week, the point needs to be made that this issue needs to be solved.
H. Brent: Do you want Penticton people down there for a week of robustness testing to add weight to the issue?
   a. Barry: Might not be necessary for a whole week. Maybe just power cycling the correlator every Wednesday will work
I. Current priorities:
   a. Multiple configurations per schedule block is highest priority
   b. Wideband mode is next
   c. Switch power issues come after that
      i. A lot of offline stuff required for this, not much online now
J. Next Priorities:
   a. Robustness issues
   b. Acceptance of correlator
   c. 3-bit samplers (Looking at starting testing in Jun 2010)
K. New issues:
   a. Rick reported very large wobbles on order of 5 – 10 minutes
   b. Lots of questions recently because doing low frequency, which look like aliasing issues because out of band RFI is influencing band
      i. Not necessarily correlator issues, but need to understand WIDAR anti-aliasing properties
   c. Dave: Might want to look at sampler statistics to see if it's really bad
L. Sean: How is draft acceptance document proceeding?
   a. Bryan: There was a meeting last week to discuss this document. Mark is to contact Sean to discuss the outcomes. Will split acceptance into 2 pieces.
   b. Mark is in Chile this week to present to the ALMA board. The acceptance document will be his last task on the EVLA project.
M. Dave: Do you guys use station board 0001? I think it is in the PTC
   a. Bruce: yes, it is in the PTC. I don't use it, but need to discuss with Kevin
      i. Can always replace the PTC with another non-VSI station board
   b. DRAO would like this board back because it is a VSI board and will be needed due to shipping requirements for eMERLIN
   c. **Action:** Kerry to ship Station Board 0001 to Penticton next week