Meeting Participants

Penticton	Amy, Brent, Dave F, Donna, Mark, Sonja, Zhang
Socorro	Bill, Bruce, Bryan, Hichem, Kevin, Martin, Michael
Jodrell Bank	Bryan, Dave, Roger

Software Focus

Sonja Vrcic
- Making progress on the VCI document.
  - → Expects to be done by Monday, April 14. Is Friday, April 18 a good date for a peer review?
  - → Michael will take the lead re: organizing the peer review and coordinate with Donna re: date, etc.
  - → **Action** – Michael to check availability of NRAO folk for a VCI peer review and distribute an email.
  - → Martin is concerned re: how the VCI will address CBE requirements.
  - → **Action** – Martin to forward a list of parameters for the CBE to be included in the VCI document.
  - → Kevin wondered if there should be a PDR. Bryan commented that a peer review should suffice.
  - → Sonja commented that many of the items in the document have previously been discussed.
  - → **Action** – Sonja to create some PowerPoint slides to be used as a structure for the VCI peer review.
- Sonja's work station is back to normal.

Kevin Ryan
- The latest GUI work is done.
  - → Tony H informed Brent that the machine was crashing occasionally; this could be caused by either Kevin's driver or different Linux versions on the two machines.
  - → Both the DRAO and NRAO machines should have the same version of Linux.
  - → **Action** – Kevin to follow up with Tony H re: Linux versions before considering changes to his driver.
- Monitoring the fans on the racks can be tested this afternoon. Brent to phone Kevin later today when ready.
- Kevin reported that James is working on the FORM board to get everything working together.

Bruce Rowen
- Dave is experiencing boot problems, receiving the prompt re: which operating system?
  - → **Action** – Bruce to forward direction to Dave F re: GNU GRUB file and boot up problems.
- Looked at lower level VCI tasks; finished the noise diode model.
  - → Will identify recommended changes and distribute an email; e.g. phase and phase rate.
  - → **Action** – Bruce to let Sonja know of changes to lower level VCI tasks to be included in the VCI document.
- Brent inquired re: correlator chip error detectors: non-continuous errors are intermittently flashed on screen.
  - → Brent would like the error messages to remain visible.
  - → Previously, the errors did remain visible. As requested, the change was made to the present state.
  - → Currently, the Station Board has both versions; this could be done for the Baseline Board, too.

Martin Pokorny
- Continuing discussions re: interface to the backend.
- Participated in a BDF meeting to review ~ 100 comments.

	→ An action list resulted with the ALMA crew identified to do most of the work.
	→ Anticipates a new version of the BDF document in ~ 2 weeks, which will be distributed for comment.
	• Revising code for the BDF that is not dependent on the BDF document.
	• Has not yet generated BLS files in the lag set assembly. Martin will contact Brent once completed.
Hichem Ben Frej	• Working on stand-alone testing for the Delay Module.
	→ Bryan has set an end of May target for full end-to-end test of the pathway from Test executor -> CMIBS -> Backend. This test should include configuration.
	→ The test executor should be done before June 23.
Michael Rupen	• Email discussions re: ALMA and SDM sets.
	→ Documentation should be available by next week.
Bryan Butler	• Attending meetings re: data products.
	→ Writing data at the CBE, how it is transferred, etc.
	→ Bryan to initiate regular weekly meetings (30-60 minutes)…Sonja to attend from DRAO.
	→ A visiting committee meeting is scheduled today and tomorrow at NRAO.
	→ A scientific meeting is scheduled for Thursday and Friday at NRAO.
Bill Sahr	• Soon to release a more or less complete version of the plan for the test bed.
	→ Should include James' latest network diagram.
	→ The plan should be reviewed.

New Software Action Items

- Michael to check availability of NRAO folk for a VCI peer review and distribute an email.
- Martin to forward a list of parameters for the CBE to include in the VCI document.
- Sonja to create some PowerPoint slides to be used as a structure for the VCI peer review.
- Kevin to follow up with Tony H re: Linux versions before considering changes to his driver.
- Bruce to forward direction to Dave F re: GNU GRUB file and boot up problems.
- Bruce to let Sonja know of changes to lower level VCI tasks to be included in the VCI document.

Continuing Software Action Items

- NRAO to test remote access to DRAO lab and contact Tony H directly if issues arise.
- Brent to consider possibilities for testing the CPCC and let Kevin know.
- Sonja to initiate an email discussion to decide where messages will be intercepted and passed on.
- Amy to release the schedule to be posted to the WIDAR website once confirmed.
- Sonja to set a review date for the VCI Protocol.
- Kevin to check re: if each board is identified with a serial number on the board.
- NRAO to clarify their schedule within the next few weeks re: 4-station prototype correlator and inform DRAO.

- Bryan to organize a meeting re: verify a process re: output to chips: participants to be Bryan, Barry, Bruce, Hichem and Ken S.
- Bruce to come up with a directory structure to support start up sequencer files.
- Martin to forward a copy of the CBE schema/config to Sonja once a stable copy is available.
- Brent to review the 4-bit and 7-bit correlation samples for the VCI as Sonja would like to ensure that the connections/syntax are agreed upon.
- Michael to clarify with Bryan re: Delay Model, on-the-fly observing, smoothing, buffering, and cuing and report back to Hichem and Bruce.
- Michael to define critical tests.

Hardware Update

Brent Carlson
- Focussing on Baseline Board testing. Hopes to be done by the end of April.
  - → Experiencing a major problem with the signal to the recirculation chips.
  - → Need to use ferrite bead to restrict the signal feeding to the Accel chip.
  - → Resulting changes should explain other issues, e.g. clock phases.
  - → Uncovering such issues emphasizes the importance of continuing with signal integrity testing.
  - → Unable to remove this bug from these two Baseline Boards; however, they can be used for prototype testing.
  - → Michael inquired re: implications for OTS. Brent replied that occasional (~ 10/sec running x1 recirc chip) errors are encountered when running the entire correlator chip array.
  - → The data quality is not affected, however comparison testing vectors between correlator chips is affected. Last night ran vectors re: Gaussian simulation with 32 errors on inputs recorded.
  - → There is no problem for phase rotation.
  - → The bottom line is that there is no impact on the OTS.
- Received the crystal part for 10G Ethernet connection testing.
- The assemblers are finishing the first 8 racks. Received 2nd set of 10 racks, assembly to start soon.
  - → Dale is installing the Meritec cable assembly for the last 3 racks.
  - → Developed a quality control check list for testing polarity, continuity, etc.
  - → Will need the 6509 GUI for checking monitor control wires.
  - → **Action** – Kevin to consider a timeline for the 6509 GUI completion.
  - → **Action** – Brent to forward the checklist for racks to Kevin.
  - → Commencement of rack inspection and final testing is anticipated soon.
- MuAnalysis received the tester and 114 correlator chips.
  - → MuAnalysis forwarded the comment that qualifying the chips is one thing, testing the board is a completely different matter.
  - → Forwarded a paper for Brent to review re: board testing.
- Working on contracting a Production Manager to visit DRAO and write a report re: production recommendations.
  - → Brent inquired of Mike Hare (HIA-V) re: contracting via ORIC but has not yet received a reply.

Dave Fort	• Dave to forward a Station Board, 2 delay modules and a CMIB to BMS.
	→ The decision has been made re: BMS to do JTAG testing on Stage 3 Build of the Station Boards.
Zhang Heng	• Finished implementing the design change re: Ferrite bead on FPGAs.
	→ Finished the 156.25 MHz crystal clock.
	→ Brent commented that the Ferrite bead change will result in a change to the heatsink.
Mark Halman	• Finished shipping crate drawings.
	→ Distributed the drawings for quote to 2 companies noting material requirements for shipping to UK.
	→ Anticipates the first prototype in a week with the full order delivered by end of May.
	→ Prototypes from Diemaster arrived. Brent is waiting for drawings from Mark and Ralph.
	→ Brent wants to perform drop tests on the boards using accelerometers and solid and convoluted foam.
	→ **Action** – Mark to follow up re: software written in LabView.
	• Completed barrier strip layout.

Project Management

Amy Fink	• Sorting out BMS duplication cost issues.
	• Updating the budget as per request from Victoria.
	• Updating the project schedule.
	• Procurement tasks.