

Minutes for AMiBA Engineering Telecom 20060601

Meeting Time: UTC 1:00, 20060601, (Taipei 9:00am, 20060601) (HST: 3:00pm, 20060531)

Regular Meeting Time: UTC 1:00 Every Thursday

Participants:

Australia:

Hilo: Ted, Chia-Hao, Fabi, Peter, Hiroaki, Patrick, Johnson, Ken, Fabi, MTC (minute).

MLO:

Taiwan: Johnny, Kyle, Su-Wei, Joshua, Locutus, Paul_H

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- **Upcoming Milestone**
 - **June 2, 2006: Sun imaging from AMiBA, without dishes, at least 5 receivers.**
 - **July 31 (+- 3 days): AMiBA-7 Dedication.**
- AMiBA current status:
 - 1.2 M dish fabrication:
 - (0601) MTC spoke to Ong over. New mold had been made and measured in Aerospace Industrial Development Corp (AIDC) on Tuesday. Ong would send the result to MT. The next step was to proceed to make a new dish.
 - (0531) No update on how to support 1.2 M or reducing the weight
 - (0521) Philippe spoke to Ong.
 - Another prototype would be made.
 - The mold had been machined again for better surface. Would be confirmed with measurement.
 - The dish surface would be measured right after being made, before extra epoxy or processing. The environmental temperature during the measurement would be monitored.
 - Philippe was concerned with the temperature effect.
 - (0504) 1.2 M dish structural support. MTC expresses concern on 1.2M dish mounting mechanism. MTC to ask Philippe to look into this issue.
 - (0504) No update on dish cover.
 - CT: Measurements on sun total power scan:
 - (0531) No update.
 - (0516) Total power detector saturation? Maybe the TP was toasted. Would investigate.
 - (0531) OT bracket had yet to arrive. The second OT control box would not be ready for another months
 - (0517) Second OT on platform Target date: End of May.
 - (0507) DRO & receiver overnight stability. Got measurement. DRO over night seemed OK in both phase and amplitude. MT urged everyone to look into what were the realistic numbers we were after. Would come back to this issue again.
- Major Issues:
 - (20060517) Large temperature variation in correlator. Major problem. Resolution to be investigated.
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- Intermittent Issues:
 - (20060517) Too much activity and work load in correlator computer? Resolved with extra computer in the cone area? Monitoring computer under the hexapod, permanent or not?
 - (20060504) ACU occasional crashes. Cause unknown. Reboot the machine would resolve the situation.
- Toward Sun Image:
 - (0531) Keiichi was in Japan. Kyle: Targeting a Sun image by June 3.
 - (0525) Keiichi: Code modified for data pipelines; also checking on the TS data for lag to visibility; also need to derive baseline and time stamps of data.

- System Testing:
 - (0525) C.T.: the last interface board (data read out) would corrupt correlation or total power data. Correlator could only take data from 6 rx's. Need some time for debugging in Taipei.
 - (0525) Kyle: Swap the tp detector didn't help. The problem might come from the IF amplifier? Took it down to Hilo, haven't got a chance to debug it yet. IF power from Rx5 IF2 is about 20 dB lower. The problem might be from the LNA. Need update
 - Path length alignment.
 - (0531) Kyle: still missed self-correlated data for three receivers. Patrick and Co. were helping in getting the data on site. MTC urged Kyle to have the order ready for compensated cable lengths in the coming week.
 - (0504) Testing Schedule (Kyle)
 - Determine delay difference and order IF compensation cable. (Kyle) Done
 - Test, assemble and install Ant7 (Rx7). (Johnson) Done
 - Install compensation cable and measure Ant7 delay with translation stage. (Johnson?) – *Late May or early June, one week. On going.....*
 - After compensation, measure fringe of each baseline as reference. (Johnson, Patrick, Hiroaki) – *June, two weeks. Need cables*
 - IF, LO monitoring. And phsw power difference, DC offset, noise property investigation. (CT) – *May, three weeks? Update?*
 - 2nd OT installation and verification. (Patrick, Ken) – *On going*
 - Remove 1st OT and install 60cm dishes. Dish/Rx alignment with TP from sun. (??) – *Late June or early July? Two weeks.*
 - Planets! (??) – *July.*
- Hexapod testing:
 - (0531) Patrick: the interpolation table worked to improve the overall hexapod pointing somehow. However, the result was not conclusive. More testing was underway in the next few days.
 - Hexapod Backward Transformation Failure:
 - (0531) Patrick: did tests suggested by Vertex. Tested results sent back to Vertex for resolution. Meanwhile, worked with MJK to seek possibility to modify our own monitoring code
 - (0522) Patrick confirmed a problem from the symptom reported by CT.
 - (0516) CT reported problem in driving hexapod below 60 degrees in elevation.
- Site & Hilo Lab:
 - (Log0530) container door damaged. Please kept door closed before fixed.
 - (0531) Hexapod transformer would be moved out of the control room. A concrete pad had benn made. (Ted & Pierre.)
 - Cold head compressors tripped, both.
 - (0531) Ted: Compressor #1 (the failing one) was replaced with #3 (used to be in the lab). Seemed worked OK on site for both #2 and #3. Peter was ordering replacement part from CTI for the ventilation fan.
 - (0526) Vendor was working on an enclosure. Need a schedule.
 - (0504) emergency power generator (Pierre)
 - (0526) Pierre reported:
 - SHELTER NEMA 4 ENCLOSURE. Mostly done. Waiting for the flood light bulbs.
 - CHANGE 50 A CIRCUIT BREAKERS FOR THE COMPRESSORS.
 - GROUNDING: Next time.
 - New ethernet switch installed. Next time.
 - Tiltmeter installed. Next time.
 - (0504) Firewall (John & Homin), struggling
 - Few more tasks or issues need to be discussed or taken care of:
 - Automate the weather station
 - A Site PA system (Over internet?)
 - Lighting protection?
 - A shelter operation procedure. Need fee back from members

- Fabric replacement (Long term, but important.)
- Ground shield, feasibility study, may contract to Bill and ARL
- Supporting cone insulation?
- Platform covers for drop-thru holes (CFRP, strong structure)?
- A stair way up to the platform – might have to order an off-the-shelf model and modify it?
- Crane?
- Calibration:
- RX/IF/LO:
 - (0531) Johnson: Rx-7 on platform and tested.
- Correlator:
- Software update:
- Dish:
- Some lingering ideas (Need further sharpened...)
 - (0511) Kyle proposed another run of photogrammetry.
 - (0511) Proty addressed data storage on site.
- Upcoming events:
 - AMiBA-13 Technical Review: June 28 - 30, 2006, ASIAA (Taipei)

Traveling Schedule to Hilo

Chia-Hao Chang	May 2 - June 16 (Hilo)
Ted Huang	May 11 - June 12 (June 13 – 24 to NRAO VLA)
Johnson Han	May 11 - June 13
Ken Chen	May 16 -
Patrick Koch	May 17 - June 12 (June 13 – 24 to NRAO VLA)
Hiroaki Nishioka	May 17 - June 12
Homin Jiang	June 1 – 8 (May 28 – 31 to Orlando)
Locutus Huang	June 6 – July 5
Mark Birkinshaw:	June 5 -11
Katy Lancaster:	June 6 -11
Keiichi Umetsu	June 9 – July 3

ASIAA Hawaii: <http://pmo.asiaa.sinica.edu.tw/Hilo%20office/>
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Please contact MTC for managing this mailing list