

Minutes for AMiBA Engineering Telecon

Meeting Date: 23-Feb-2006

Participants:

Australia:

USA: Bill, Pierre, Ted, CT, Johnson, Fabi, Johnny, Ken, Patrick, Joshua

Taiwan: Homin, Edwin, Eugene, Paul S., Chia-Hao, Hiroaki, Kyle

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Minutes Recorder: Kyle

I. New Action Items:

II. Previous Action Items (still open):

Kyle - Detailed test plan.

Philippe - Summary report of photogrammetry measurement.

Keiichi/Patrick - Mount testing.

Bill/Ted/Pierre - Modification of shelter.

III. Closed Action Items (as of this meeting):

IV. Miscellaneous Discussions:

Platform:

(09/Feb/06)

MT - Philippe sent in his summary to me. I will ask him to circulate it.

(29/Sep/05)

Philippe - I will spend some time to look into the safety issues of operation.

Shelter:

Pierre - The new shelter control is working, but I don't recommend using it right now without load cells. The load cells will come in two weeks. In the mean time, please use the original control.

(13/Oct/05)

Pierre - One year ago we asked Manfred to add a few relays and software in PLC to indicate mount is in parking position. We need to test its function whether the relay is closed when the mount is parked when next time I am in Hilo.

Mount:

Patrick - We plan to do 200-star pointing and tracking with and without interpolation table.

CT - One thing to note is we have just installed correlator modules onto the platform. We added approximately 27kg to each correlator frame.

Patrick - We should keep updating the log of changes to the platform.

(16/Feb/06)

Keiichi - The timeout problem seems to be solved with new ACU software. Michael ran tcpdump test and did not find any further timeout. There were two types of timeout as described in previous meeting. Stephan explained the disappearance of type (2). However, type (1) is still a mystery. Michael suggests to still keep monitoring the network communication.

Keiichi - Hiroaki and Michael are working on automatic polarized pointing procedure in a boss.

(09/Feb/06)

Pierre - I compared the network diagram from Homin and what's inside the container and found one extra switch. There are cables everywhere. I want to install a more professional 19" switch and clean up everything.

MT - I agree we should try to make the container more professional. Pierre, please send your idea to Homin.

(25/Aug/05)

Patrick - Some temperature sensors have loose wires that need to be soldered. Someone onsite or in Hilo can do it.

Minutes for AMiBA Engineering Telecon

Site:

Ted - Bill finished the cover on supporting cone. The shelter motor M3 has been fixed. As for the shelter work, Aloha machinery is waiting for some material from Honolulu. We will start drill holes for the anchor bolt. And yesterday Bill and I went to Honolulu to visit the container company. They need one week to finish all the work. We will get the container by early March. When it arrives, we will leave it in Conens till the site is ready.

(26/Jan/06)

MT - Keiichi could you start thinking about the observing plan for the year based on some information and assumption of hardware availability and put it in writing to show people?

(19/Jan/06)

MT - I asked Philipe to start design an insulating wrap around the cone and hope to reduce thermal deformation. That's a long term plan.

(08/Dec/05)

Pierre - I got a quote for the 2ndhand generator. It's about 10k including shipping to site. I'll also look for some comparison.

(11/Aug/05)

M.T. - Open issues in general on site:

- (1) spare parts for the mount. Philippe will be in charge of it.
- (3) lightning protection
- (4) emergency generator
- (6) accommodation on site -> 2nd container for sleeping.
- (7) a new car
- (2) helium lines and cables routing to the platform
- (5) how do people access the platform. Cherry-picker, ladder?

Receiver:

Johnson - Both Rx on the platform are working. In the lab, Rx1 used to have higher Trx in one arm. It was caused by OMT having higher loss in the main arm. After changing the OMT, Trx in both arm are about 60K. I am going to do cryogenic tests on Rx1 and Rx2. It should finished by this weekend. Next week Johnny and I will start assembling Rx5 and Rx6.

MT - Patrick, please summarize the preparation work for 1.2m beam pattern measurement, and we'll also need the schedule for 1.2m dish. Let's discuss this issue offline or later.

(08/Dec/05)

Pierre - I found that the LNA bias comes from a 7805 regulator which is sensitive to temperature change. I ordered a 8588 chip which is programmable and more stable. I plan to use hair dryer to test it.

(10/Nov/05)

Kyle - The first two Rx on the platform can accept one polarization of calibration when the cal source is ready.

(09/Jun/2005)

Pierre - Two quick fixes to the LNA power supply card.

1. Reverse the protection diode instead of removing it should provide a protection at 3V.
2. The polarized capacitor at output is reversed and I suspect it is dead. They should be replaced.

LO/IF:

Eugene - We have finished testing IF/LO #7 and will start testing #8 next week.

Correlator:

CT - We spent two days to install all the correlator modules. We will finish wiring and turn on power tomorrow. Tomorrow we will also install the translation stage so that we can get some fringe. Next week we will try fringe from sun.

Homin - Will you connect the GPS to correlator PC?

Minutes for AMiBA Engineering Telecon

CT - It is not necessary right now. Eventually we will pull a cable to connect the 10MHz from GPS to correlator PC.

(16/Feb/06)

CT - I checked the new corr PC in Taipei and it looks ok but haven't finished yet. So I will ship it out next time. As for the prototype data board, they are compatible with the new system. So I can set up another system down in Hilo some time. I am still working with Warwick to solve the data transfer process problem.

(26/Jan/06)

CT - As for parts for expansion, I haven't heard from Warwick because he just got back from vacation. I will contact him again.

(06/Oct/05)

C.T. - I want to test one baseline with electronically-tuned attenuator for LO to balance the power between phase states. One concern is if the control has some delay (like we found in prototype testing with a PIN attenuator in 21GHz LO), then the scheme would not work.

Calibration System:

Homin - Yen, I-Chen (Daniel) will come and work with Kyle. First thing may be to work on calibration system.

(09/Feb/06)

MT - The next pacing item is the calibration system.

Pierre - I think the thing to start could be the mechanical structure Chia-Hao designed.

(13/Oct/05)

Kyle - I will put together a schedule when the calibration should be online and when we should really push to finish the system.

(29/Sep/05)

Kyle - I will circulate the test results presented in the workshop for more comments. And we also need to discuss the next step of the calibration system.

Dish:

Paul S. - The primary surface was measured this week, but not within spec. The overall shape is correct, but the roughness is more than 200um, while the spec is 50um. It was sent back. Cotech will redo the surface and measure the shape before coating next time.

Ted - We have studied the cover of 60cm dish. We can either hold the fabric with aluminum frame or tight it down with wires.

Bill - I think we can order more Goretex fabric to test both ideas.

(16/Feb/06)

Paul S. - The 1.2m primary will be sent for surface measure tomorrow. Li, Huan-Hsin will be there to observe the procedure.

(12/Jan/06)

Ted - About the 60cm dish cover, Dayton said he can only finish the structure early next week. By that time, I will be gone. The fabric from GORE will come in early Feb.

Testing:

(09/Feb/06)

MT - Kyle, please work with CT and Johnson to produce a more detailed test plan.

Misc:

Paul S. - MT sent out the schedule for university review. They will visit the site on first day and we will do presentation on the second day.

Paul H. - Next week I will put up a suggested list of presentation.

(26/Jan/06)

Keiichi - Mark Birkinshaw and Katy Lancaster are planning to come to Hilo. When will we be doing fringe?

MT - We will have first light with dish, and it will happen after the shelter elevation is done. And by the time we have a successful fringe, we may want to have a dedication, also for the NSC review.

Paul H. - For the review, I think it is better held in Hawaii where they can see the actual thing and a successful fringe. We'll try to arrange a good time for it.

(16/Dec/05)

Minutes for AMiBA Engineering Telecon

Patrick - MT mentioned that we should have a place to collect all the important information and factors of the system, different from the everyday communication of problems.

CT - I think for what Patrick said, people can request such information in the weekly meeting and the responsible person will come up with the information and be collected somewhere. The important information does not change very often.