

Minutes for AMiBA Engineering Telecon

Meeting Date: 02-Mar-2006

Participants:

Australia:

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

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

USA Dial-in = 1-877-505-6247; passcode 8339148 #; mod_code 2917771 #

Outside USA Dial-in = 1 630 693 3224

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:

MT - I will check with Debbie on the progress of the motor order.

Pierre - Individual motor control is working, but there is some problem with the switches. We will also need some bumpers. I am expecting the load cells to arrive next week. After receiving them, I can finish the control part.

MT - The shelter control modification schedule may collide with the shelter elevation. Please check it and coordinate with Ted on the schedules.

(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 took two runs of 250-star pointing runs last week. The fitted amplitudes from the two runs still differ by 0.3~0.4 arcmin, similar to previous 100-star pointing results. We will try to see what we can learn from this. I would also like to clearly identify different components in the pointing error. The mount tilt and cone orientation we should be able to see, but so far I haven't been able to identify them yet. We'll keep trying.

Patrick - We also started to do pointing with different polarizations. There were some minor problems. We'll solve them and continue with the test.

MT - Basically we have tested the interpolation table and it works. Now the problem is on the repeatability. As for automatic pointing, the pipeline is running except for polarization part. However, there were still some type 1 timeout.

Homin - When we examine the network communication more closely, we found the type 1 timeout is always there. Sometimes you are lucky and you wouldn't see timeout, but sometimes you are not so lucky. We still need another computer to monitor this timeout issue.

(23/Feb/06)

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

Minutes for AMiBA Engineering Telecon

(16/Feb/06)

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

(25/Aug/05)

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

Site:

Ted - We visited Aloha machinery yesterday, and they said they could finish the parts for shelter elevation in two weeks. They could deliver the I-beam for front next Monday. That can help us on the preparation work a lot.

Ted - The living container has not been shipped out from Honolulu yet. I have already arranged with Conens to store the container for two weeks when it arrives. And I will schedule with them to transport the it to site and a crane for unloading.

Ted - We will install another compressor and set of helium line for the next two receivers. One compressor could support four receivers, but we don't want to interrupt the test on the first two. Therefore we are going to install the other compressor at this time. For that, we will need the cold head power splitter box that Pierre is working on.

Pierre - I need some connectors to assemble another two splitter box. We probably got this shipment today and I can finish them by tomorrow. Then we can have one box in Hilo and three on site. Each box can support four cold heads.

Pierre - I just sent some files to Homin about the network in the control container. I suggest we buy two switches to be put in a 19" rack and tidy up things in the container. The network configuration is not changed, just physical locations of the switches will be different. If Homin could select the model of switch, that would be very helpful.

Homin - I need to know all the network detail in the container. If anyone wants to add a switch or a cable, please inform me first.

MT - Let's talk more about Pierre's plan after the meeting.

(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 - Rx 1,2,5,6 are being doing test for the compressor in Hilo. Next I will assemble Rx 5 and 6 for cryogenic tests. Rx 1 and 2 are ready to be installed on platform next Monday. And Rx 3 and 4 are doing well on the platform now. We will do translation stage test today.

Chia-Hao - The translation stage is physically good. We will connect the cables and control for testing later.

Minutes for AMiBA Engineering Telecon

Joshua - We have two electronics boxes on the platform. When Johnson installs another two receivers, I can install another two boxes for him.
(23/Feb/06)

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:

Johnson - We need Shu-Wei (Edwin) to come and update the IF/LO #3 and #4.

Eugene - #7 and #8 are all tested and shipped out yesterday.

Johnson - We need a quote for the Andrew cable. Actually we have found out some information from old PO, but vendor said they don't have it. I will check with Debbie on this issue.

Correlator:

CT - I have installed all the modules into the correlator frame. We are going to test fringe with noise source.

MT - Kyle talked to me about the phase center alignment. He seemed to think we can do phase center before aligning the receiver+dish. What do you think?

CT - I think if we align the rx+dish, it is more like an exercise because we will need to remove the receiver later when we replace the IF/LO box. We can discuss it later.

CT - Next week we can also do some long term monitoring or offset issue.
(23/Feb/06)

CT - 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.

Calibration System:

(23/Feb/06)

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.

Minutes for AMiBA Engineering Telecon

Dish:

Paul S. - Dr. Ong told me they removed all the coating and rasin this week. They will put the rasin on and machine the surface again.

Locutus - About the 60cm dish, I still have to measure the last dish's beam pattern. Right now we are lacking spectral analyzer. Eugene is going to check with Agilent and see when it will come back. The new feedhorn fixture is being made now.

(23/Feb/06)

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.

Testing:

(09/Feb/06)

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

Misc:

MT - Next Thursday and Friday is the university review site visit. We will have three reviewers, two university officials coming, and several of our people will also come for presentation. People will start to arrive on Wednesday. Not much work will be scheduled on Thu and Fri.

Patrick - I am wondering about the second optical telescope issue. One suggestion is to install the spare C-8 on the platform and swap ccd with the original C-8 for some quick result. In the long run, we would still like to set up an independent system.

MT - That's fine. The issue now is with the OT bracket. Bill thinks the bracket will need some modification. I think after Johnny finishes with translation stage, he could work on the bracket.

Homin - Locutus sent out a request to buy some components to setup a new OT system. I don't know if it is necessary.

Locutus - The idea was discussed in the science meeting. We would like to have a different system for cross-check.

Patrick - I agree with the idea of cross-checking. However, using a different system, we need to be very careful about the systematics such as field of view, star finding algorithm, etc.

MT - The idea of using two or three OT for pointing simultaneously to check for platform deformation was raised in the beginning. However, to cross-check the OT itself, we probably don't want to spend too much effort. Let's think more about it.

(26/Jan/06)

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

(16/Dec/05)

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.