

Minutes for AMiBA Engineering Telecon

Meeting Date: 04-Aug-2005

Participants:

Australia:

USA: Paul, M.T.

Taiwan: Chia-Hao, C.T., Johnson, Patrick, Pierre, Shockly, Kyle, Po-I, Homin, Hiroaki, Keiichi, Guillaume

USA Dial-in = 1-800-653-5390, 6668081#

Outside USA Dial-in = 1 773 843 6301

Minutes Recorder: Kyle

I. New Action Items:

Po-I/Ted - Design a sturdy optical telescope mount (including fixure of the CCD).

II. Previous Action Items (still open):

(07/Jul/05)

Pierre - Top priority to improve the shelter.

(07/Jul/05)

Philippe - Photogrametry measurement preparation.

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

Ted - investigate the selection of cherry-picker and articulating boom.

IV. Miscellaneous Discussions:

Platform:

M.T. - Philippe, Ted and Joshua are putting the platform on hexapod right now. They will torque down the bolts tomorrow. This is a big step for the project.

M.T. - Philippe has good contact with the photogrametry people. We want to rent the equipment and in parallel we will send two people to be trained and come back to do the measurement ourselves. The software usage is included in the rental fee. We also want to sign a consulting contract with them so they need to help if we have a problem.

M.T. - Philippe and Ted will work on the dummy load. They think it should be simple. I think the photogrametry measurement will probably happen in mid September.

(28/Jul/05)

Philippe - We may use photogrametry to check the position of upper u-joints. The accuracy may not be as good as we need but it is only a small effort to add when we check the platform. If we want to it better, we need to use laser-tracker.

Site:

M.T. - Ted has selected a model and we are in the process of paper work.

M.T. - Joshua is doing the 48V cabling.

M.T. - John Barn (MLO site manager) does not like the idea of mobile home to be parked in the site permanently. He did mention the possibility to transform the room next to the kitchen to our bedroom after military people move out their equipment. He also did not like the idea of using their shower because of limited water supply.

Pierre - If we have a camping car, we can drive somewhere else and sleep.

Shelter:

Pierre - My student is finishing today. I will forward her report to you tonight. Basically the fix includes: (1)two buttons to operate automatically (open and close) and an emergency stop; (2)sensors on the cable to monitor the tension to maintain constant tension and avoid overload.

(28/Jul/05)

Ted - The original cable used to pull the shelter is not thick enough. They look cruched and need to be replaced. I have ordered thicker cable and some hoist ring in order to make the cable safer. They should come in about two weeks.

Pierre - We should find an expert who can come to inspect the shelter and make a report for record. And he may check our improvement plan as well.

Paul - Ask Allen if he knows someone suitable for this role.

(14/Jul/05)

Minutes for AMiBA Engineering Telecon

M.T. - Let's revise the site safety regulation. All of you need to talk to Ted or M.T. before going to ML.

Mount:

M.T. - I send out a draft version of the meeting minute. We've got their attention, but is that enough? I think we should not pay them right now. There are more work to be done.

(28/Jul/05)

Philippe - I have asked them if the geometry parameters can be entered by us on site instead of Vertex changing it in Germany.

Receiver:

M.T. - Todd Gier is working on our LAN. We will have complete 28 LNAs some time. For spare LAN, as Prof. Huei Wang suggested, we may consider sending the chips to Wisewave for packaging.

C.T. - We might need to ask Todd Gier to send us the housing the bias circuit drawing.

M.T. - We will put the fence outside the Hilo office next week. When Johnson comes, we can put the compressor outside and start to work.

(14/Jul/05)

Ted - I have quoted for the 3rd compressor and additional adsobers.

(07/Jul/05)

Johnson - We expect to ship Rx5 and Rx6 in mid Aug after IF/LO is finished.

(30/Jun/05)

Pierre - We still need the fencing. I got three quotes but all expensive.

M.T. - Kevin has suggested some cheap, ready made, dog house that may suit our need. I will hold this issue until we find a good solution.

(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:

Pierre - I have some suggestions on the IF AVG control voltage circuit. We can discuss this issue in the IF/LO review meeting tomorrow.

Shockly - *LO#8 has too large power difference (1.2dB) under 90 deg phase difference.* It is not within spec. I will check other combination to see if it can be improved.

Correlator:

C.T. - I have the backplane back and I am testing it. It seems to be working. I plan to test it in Hilo in the end of Aug.

C.T. - Po-I needs to go to ML when the bracket is sent. He will work with Ted to setup the scaffolding to prepare for the installation.

C.T. - We have tested the correlator box and bracket interface in Taipei, but the interface of bracket to the platform can only be tested on site. I think it will happen after the photogrametry dummy load test, after mid September.

(28/Jul/05)

Po-I - About the bracket of the box, the 3D figure is finished and I shall finish the 2D figure in one or two day.

(14/Jul/05)

C.T. - We will have another discussion about how to install the correlator box onto platform.

Calibration System:

Kyle - I have found quotations for the mixer and will place the order. I am still looking for quotation for the switches. There is a SP8T model but is too expensive.

(28/Jul/05)

Pierre - I will try to order the PC104 this week. And then I will concentrate on shelter improvement. I think two months is too short. Before the end of this year is more realistic.

Minutes for AMiBA Engineering Telecon

Helium Lin:

M.T. - We are close to installing the helium line. Chia-Hao, can you send the helium line soon and prepare to come to Hilo?

M.T. - Ted did an experiment to coil up a 9m helium line to the platform. It is under evaluation now.

M.T. - I will check with Ted about the status of cable tray and mounting.

(14/Jul/05)

Chia-Hao - We can ship the helium lines with the receivers.

1.2m dish:

Patrick - I sent out a list of issues I collected from people. There are two open issues. One is the spec of the tolerance. Huan-Shin is using a ray-tracing software (OSLO) to check the tolerance. And should we (ASIAA) verify their FEA model before Cotech starts to produce the primary?

Paul - Patrick, please continue to contact Philippe for his comment. In the mean time, we probably don't have enough man-power, so we should let Cotech proceed to build one and test it.

Patrick - Another open issue is about the size of the apex hole. Prof. Chiueh wants to enlarge the hole so it may be used for an focal-plane array in the future. Maximum size being considered is 190mm limited by the secondary size.

M.T. - Can Cotech enlarge the hole afterward?

Paul - Someone should do a cost estimation of (1)build new dishes with larger hole (2)enlarge hole of current dish (3)focal plane array receiver cost.

Misc:

M.T. - I will check with Joshua about the 30m cable for the optical telescope test on the platform.

M.T. - In two weeks, there will be a window to do pointing when Vertex should have new version software for us. And I will make sure in two weeks we will have a very sturdy mount for the optical telescope.

Michael - Some comments after the meeting with Vertex:

1. I don't know how they fix the on-source flag, since the servo-loop is always closed. I think we will need to test.
2. About the tools, I would like to see some users be familiar with the various utilities I have provided to analyze the mount.
3. If the pointing error can be reduced, the simple analysis package can work, but we shouldn't count on that. Among other things, I think we should improve the analysis to find the center of rotation.
4. I will also work with Hiroaki to improve the pointing schedule pipeline.

M.T. - Patrick, please discuss and come up with the person to work on the issues next week.