

# Minutes for AMiBA Engineering Telecon

Meeting Date: 28-Jul-2005

Participants:

Australia:

USA: Ted, Philippe, Paul

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

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Minutes Recorder: Kyle

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## I. New Action Items:

## II. Previous Action Items (still open):

(07/Jul/05)

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

**Pierre** - Top priority to find a solution to improve the shelter.

(07/Jul/05)

**Philippe** - Prepare mechanical measurement of the platform. Contact photogrammetry people.

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

## IV. Miscellaneous Discussions:

Platform:

**Philippe** - The interface ring was shipped to ML yesterday and was reassembled. The deformation of platform we measured on the ground seems to be better than before. I need to do more analysis.

**Philippe** - Scaffolding is setup again. We will remove the dummy ring tomorrow, and then install the platform.

**Ted** - Lots of small things to do next week, but we will remove the scaffolding after next week. Then the mount and platform can be operated again.

**Philippe** - About the photogrammetry, we got a quotation last week. However, there was some discussion last week about sending people to be trained and do it ourselves. So nothing more is done.

**Philippe** - We may use photogrammetry 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.

(14/Jul/05)

**M.T.** - We need a plan for the photogrammetry. Should we send some people to train?

**Philippe** - We hope to do full loading test in early Aug, but we need further planning on the schedule.

Site:

(14/Jul/05)

**Ted** - I have found a new Gini-3422N model in Honolulu, and now I waiting for quotation. The one suggested by Michael (TA-34N) is discontinued but can be found in 2nd-hand market.

**M.T.** - Joshua will come to do the 48V power distribution. First from container to cone and later from cone to platform when the platform is installed.

Shelter:

**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)

**M.T.** - The shelter is getting dangerous. I almost stopped people from operating it. Fixing it should be our top priority. Pierre please work on this issue.

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**Paul** - Should we find a consultant to help us?

**Ted** - The temporary fix of shackle on the truss is damaging the structure. It is ok temporarily. I have designed a new attachment that uses a hoist ring to avoid damaging the truss.

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

### Receiver:

No update.

(14/Jul/05)

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

(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.

### Mount:

**C.T.** - We will have a teleconf with Vertex next Tuesday UT 0700.

**Patrick** - I will make a list of issues to discuss with them.

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

### LO/IF:

**Shockly** - I tried to verify LO phase shifter but failed. We found the problem was due to Vcc dropped. We will check which part went wrong.

**Pierre** - I found in Hilo several months ago that the IC driving the phase shifter is not installed correctly. It has open collector and needs some pull-up resistors.

**C.T.** - We will have a IF/LO review meeting next week because we haven't looked at this system serious for quite some time.

### Correlator:

**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.** - I am waiting for the backplane to come back from fabrication. I am also doing some control diagram for people to understand.

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

### Calibration System:

**Kyle** - This week I asked some quote for mixer and switch. I am waiting for their response. On the other hand, I asked Ted to help measure some dimension when has time for Chia-Hao to try the mechanical layout. I "wish" the prototype can be finished in two months.

**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.

### Helium Lin:

(14/Jul/05)

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

(07/Jul/05)

**Chia-Hao** - I have got the helium lines ready. I don't know when to ship yet.

(30/Jun/05)

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**Ted** - I will use the 9m helium line in Mauna Loa to test the routing. I have also given some lengths to Helix in Taiwan. They will help us estimate the pressure drop.

### 1.2m dish:

**Huan-Shin** - Ted asked some questions about the mechanical design. Basically, the drawing is wrong. The correct secondary size is 190mm, not 130mm. The primary apex hole should be changed to 50mm, not 42mm as shown on the spec sheet they received from us. The spec sheet was from Bob long time ago.

**Paul** - Find out who the original design is from and assemble the needed people to sort out this issue offline.

**C.T.** - Talk to Patrick and Philippe when you have progress.

### Misc:

(16/Jun/2005)

**Patrick** - Need some help for a 30m long 48V power cable. It is needed when we want to do pointing with the platform.