

Minutes for AMiBA Engineering Telecon

Meeting Date: 8-July-2004

Participants:

Australia: Michael

USA: Derek, Ferdinand, Jeff

Taiwan: Paul Shaw, Ted, Pierre, Steven, Kyle, West, Huei, Homin, C.T., Joshua, Tashun

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Minutes Recorder: C.T. Li

[previous weeks comments](#)

I. New Action Items:

AI-July08-1: Steven - To summarize the progress of balancing LO output power between two phase switching states.

II. Previous Action Items (still open):

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

AI-June10-1: Philippe/Ted - To check the results of previous acceptance measurements for the 30 and 60-cm dishes.

Ted - We worked with Along to re-fabricate the 2nd for 60-cm dishes. The delivery time is 2 weeks after P.O. is received.

Paul Shaw - Along is preparing the final quotation. Ted has some discussion with them about the payment. I think we should reach some internal agreement.

Ming-Tang - Since Ted is going to be in Germany for a while, we should get things started soon after we reach some agreement among us.

AI-Apr22-2: Philippe/Ted - To check on Along's analysis and come up with a conclusion on how to repair the platform.

Ted - Since Along has done 90% of work (with a best-fitted plane model), we will pay for it and close the contract. They also gave us some suggestion for platform modifications. It will take CMA 3 weeks for modifications, 4 weeks for shipping from CMA to MLO. Philippe is going to analyze the steel or carbon-fiber ring underneath the platform.

Homin - We have to use the platform after the 3rd modification, probably not with the steel ring. That is for the 2nd phase, possibly.

Ming-Tang - According to Ted, their result is not up to our expectation. I tends to cancel the contract.

IV. Miscellaneous Discussions:

MMIC:

C.T. - We plan to have Wisewave help us on the packaging of some MMICs for LO chains. We will come up with the specs and discuss with Wisewave about the cost and the way of cooperation.

Receiver:

Homin - We're still working Rx #3 and 4. Joshua is taking the temperature data when Rx is cooled down. Johnson is testing Rx #1, 2 in Hilo. The bias current for MMICs looks fine.

Steven - Tashun plans to ship Rx#3 to Hilo in 2 weeks.

Johnson - We have measured output spectra of receivers in Hilo. Rx#1 looks good. We're trying to trouble shoot the 42-GHz LO module of Rx#2.

LO/IF:

C.T. - The revised slope equalizer and additional gain stage will be installed in IF/LO modules. The 20-dB slope correction, additional to the 13-dB in correlator 1st section, is used to compensate those due to Rx, IF cables, and

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correlator section. It will replace the existing equalizer in IF/LO. The loss is about 14dB, with 4dB IL.

Derek - For the additional IF amplifier to compensate the loss due to the slope equalizers and low output power of receivers, Prof. Chiueh and I were discussing using of variable gain amplifiers. I found an amplifier with gain of about 25dB, and 10dB gain variation due to control voltage.

Steven - I am still checking the delivery of DRO with Prof. Chu's students. The other thing is that we try to make two LO output power to be the same (not the LO power between 2 states). We might use Mylar sheets in one path to balance the LO power.

Steven - We have set up a meeting last Tuesday. Prof. Chu has sent out a conclusion by email. He will add one more IF amplifier without 3 pads in between. For the DRO, I have checked the output with a spectrum analyzer that if we use the external 100-MHz oscillator, it will work properly.

Calibration System:

Kyle - I am leaving for Hilo next Tuesday to work on the calibration system with Ferdinand before he leaves.

Ferdinand - I have been fixing the calibration system brought down from the summit. I have been working on the translation stage behind the sub-reflector.

Correlator:

C.T. - I am waiting for the frame and enclosure. I plan to ship components by this month.

Platform/Mount:

Ted - For the mount, Vertex started to disassemble the wiring last week. Philippe and I also disassembled the platform and had it shipped out yesterday. In this week, Vertex will start to disassemble the jackscrews, U-joints, and support cone. According to schedule, mount should be shipped out by next Friday. It will take about 40-day for shipping from Germany to Hilo. It also depends on the custom clearance. I will go to Florida for the shelter with Ferdinand.

Ming-Tang - There were some open issues found last week, and the acceptance test continues. The mount seemed to behave as expected, and the platform will be sent back to CMA, although we have got the quotation or schedule on the fix of the platform.

Dish:

Site:

Pierre - About the container, I have been in contact with Ferdinand to find out what to put in, power distribution and so on. I plan to go to Hilo during the weekend.

Joshua - I got a quote from a local company for the equipment cabinets, which will be placed inside the container. The total cost of two cabinets is about 1500 US dollars.

Pierre - I received message from Ferdinand concerning the lightning protection, equipment container, and 48-volt DC distribution. I'll ask around about the details.

Ming-Tang - We need to find a person or team to work on the control software and pointing.

2-Element Prototype Testing:

Derek - MLO is shutting down the primary power today. Johnson is going up to shut everything down.

Administration: