Minutes for AMiBA Engineering Telecon

Meeting Date: 9-September-2004

Participants:
Australia: Michael
USA: Pierre, Kyle
Taiwan: Ming-Tang, Paul Shaw, C.T., West, Patrick, Johnson, Homin, Steven

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Minutes Recorder: C.T. Li
previous weeks comments

I. New Action Items:

II. Previous Action Items (still open):

AI-Sept02-1: Philippe – to provide Along a more clear definition about the best-fit plane for them to complete their finite-element analysis (some examples in ANSYS?)
Ted – This Monday we had a meeting with Along. They will need 3 weeks to complete the un-finished items. We also asked them to change the boundary settings to reflect more realistic situation. We're still working on the best-fit plane definition.

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

IV. Miscellaneous Discussions:

MMIC:

C.T. – We have got a quote for doubler housing. Engineers in Wisewave are reviewing our drawing right now.

Receiver:
Ming-Tang – Both receivers in Hilo were warm up. Kyle has started to cool one down again yesterday. We will ship one spare cold head to Hilo.

C.T. – Johnson is going to test the phase shifter in low temperature. He is setting up the test dewar.
Ming-Tang – We need to make sure the device survive during the thermal cycles.
Homin – We're testing the electronic box with Rx#4. A student is modifying the codes for Rx monitoring.

LO/IF:
Steven – I will look for the problem with IF/LO #2 sent back from Hilo. I sent 2 PIN switches back to Millitech for repairing. I placed the PO for one 4-channel DAC module from Advantech.

Steven – I have sent out the pin definition yesterday, which can be used for the trouble-shooting.
Pierre – We should buy one channel DAC module for variable-gain amplifiers and test it.

Calibration System:
Kyle – We have ordered one YIG oscillator, used as a CW source. Then a doubler, a 4-way power divider, and power amplifiers will provide 24-dBm output power before the distribution cables. We also ordered some phase shifters and attenuators. The 20-foot flexible cable for higher frequencies will cost 2,000 US dollars each. The loss is about 1dB per meter. The harmonic generators will convert the signal up to W-band.

Ming-Tang – I am working on getting the parts for our current scheme.

Correlator:

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C.T. – Advantech (the computer company) is still trying to find out the problem with the time drifting. I will try to get them to solve the problem within a week, or we have to find another solution. At least we can still use the prototype computer for the moment. I circulated the layout for the total power circuit for people's comment. Tashun has put together one frame. We will insert the components and work on the wiring next week.

C.T. – Tashun is preparing all the packaging material for shipping the correlator to Hilo. We will ship the components in mid Sept. We got the motherboard back from the manufacturer. They replaced some parts for the time drifting problem. However, after an hour test, the problem is still there. We're going to test it for a day to see how much it drifts. For the revision of total power circuit layout, I will circulate it once received from the company for people to comment.

Platform/Mount:

Ming-Tang – Philippe has finished the discussion with CMA, and the scope of work is agreed between them. The P.O. for platform modification will be issued in next few days. Finite-element analysis is required to determine how to re-design the ring, where the U-joints connect to the platform. Jack-screws were in Honolulu, waiting for custom clearance. The cone was in L.A. Jackie will be working with Celia to get it cleared and shipped to Hilo.

Ted – Platform is in CMA now. The schedule for modification is 12 weeks after the order is placed.
Ming-Tang – For the mount, the supporting cone stays in L.A. for custom clearance, haven't got to Honolulu or Hilo yet. Jackie and Debbie are working on it. Philippe will be there, starting Sept. 21st, making arrangement for the installation. Vertex shipped out control computers this week.

Dish:

Ted – We're waiting for ITRI to measure the modified 60-cm dish in next week.
Patrick – We're preparing to test the dish outdoors.

Ted – The 1st secondary mirror will be sent to ITRI for measurement, replace the old one on a 60-cm dish, and have the alignment measured in next week.
Patrick – Prof. Chu mentioned there is still some problem with the near-field measurement setup. One major one is the large data set we have with the 60-cm dish, at least two data points for each wavelength in order to derive the far field. We're thinking the possibility to do the measurement outsides with Proty's new tripod.
Jeff – We had the shop make 3 blanks for the new secondary.

Site:

Ming-Tang – Pierre circulated the updated wiring for the site. The Ethernet and telephone connections between visitor building and the container will use optic fiber.

Ming-Tang – The work on the site is done. We try to make the final payment to Ludwig within this week. We need to have phone line set up.
Ted – I got an email from the shelter company saying that the motor arrived two days ago. They tried it this morning. It works well. They still need to do more system tests. It is expected to arrive in early Oct.
Ming-Tang – For the shelter, we need to have all the documentations, including electrical wiring, before we closed this contract.
Ted – We met with Along to discuss the finite element analysis. There are still some un-finished items. They need us to provide a more clear definition for the best-fit plane.
Pierre – We need to check the voltage drop along the 48-V cables from the transformer to DC-DC converters.

Administration: