

Minutes for AMiBA Engineering Telecon

Meeting Date: 12-Feb-2004

Participants:

Australia:

USA: Paul Ho, Ming-Tang, Ferdinand, Derek

Taiwan: Paul Shaw, Huei, Kyle, C.T. Li, Johnson, West, Homin, Ted, Steven Teng

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Minutes Recorder: C.T. Li

[previous weeks comments](#)

I. New Action Items:

AI-12Feb04-1: Ted/Philippe - Generate a load test plan for platform after the 2nd modification.

AI-12Feb04-2: Ming-Tang - Ask Michael to generate a plan for software interface and mount/platform pointing test.

II. Previous Action Items (still open):

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

IV. Miscellaneous Discussions:

MMIC:

Huei - We haven't received those chips from Paul Clenworld yet. Paul Shaw has ordered some desiccators to store them. Milton will be the person responsible for proper handling of those chips in lab.

C.T. - We have modified the DC amplifier circuits, will try again to measure output noise of multiplier chips.

Warwick - For the multiplier noise measurement, things to consider is whether this new design has more gain than the old one, if it does, it will output more noise; the other thing is the current level running the transistor within the Gilbert cells because the current level is higher, you could get significant amount of shot noise.

Huei - Paul Clenworld will ship InP chips to Taipei this week.

Ming-Tang - Sent Todd Gaeir an extension of MMIC contract few weeks ago, waiting for his reply.

Receiver:

Ming-Tang - We received 5 OMTs so far, waiting for another 7 units, and we have most of RF and mechanical parts for 7-element.

Ming-Tang - 2nd receiver is ready, however we like to keep it in Taipei for a while to test the electronic part. Plan to ship it after we finish the 3rd unit.

LO/IF:

Steven - Will test the 2nd IF/LO unit in temperature chamber probably on next Tuesday, need to borrow a 21-GHz synthesizer from Prof. Chu. Will start testing all of components next week.

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Steven - Some components have arrived. Prof. Chu's student will assemble the parts next week. I would like to test the equalizers first. According to the LO temperature vs. power record, after 3-hour warm-up, the temperature is still rising up (due to the amplifiers), the output power from the amplifier is still reducing. (2dB drop in output power after 20-degree increase in temperature). Would like to measure the phase and amplitude change of the module over temperature.

Correlator:

C.T. - Successfully programmed the phase switch circuit, it now can generate the phase switch signals.

West - The 60"-long semi-rigid cables are too long to fit in Ted's frame design. We have asked a local cable company (Raison) whether they can either trim and bend those cables in lab or manufacture some new ones. Will ask them for a formal quote including the specifications of connectors and cables.

C.T. - Haven't tested the phase switch generator circuit yet. Will test it soon. Started looking into Warwick's programs. West is still working on the drawing of IF cable routing from correlator 2nd to 3rd sections. I will work on the testing of circuit boards and software. Ted plan to have the correlator frame design sub-contracted in mid Feb. The lead-time is about 4~6 weeks. Probably will receive Derek's modules by end of this month. Around mid or end of March, I can start putting together correlator system. The initial testing of correlator, readout, and data acquisition system will start in April. Then I would like to ship the correlator system to Hilo to test with 2 receivers and W-band translating noise source. By end of June, Johnson and Mark can finish assembling of rest of power dividers and circuit boards.

Platform/Mount:

Ted - Philippe and Bob Romeo are checking the component list for the 2nd platform modification. We plan to do the modification and load testing from Feb. 18th to March 3rd.

Ming-Tang - CMA will work on the 2nd modification of platform till receiving official PO from us, thru RCUH. The fix will start around Feb. 23rd in Vertex. Philippe, Ted, and CMA will be there for 2~3 weeks, including testing. In the mean time, we asked Along to do the FEA on the current status of platform.

Calibration System:

Ferdinand - We're going up tomorrow to test the CW noise source again, still waiting for one component for photonic noise source.

Ferdinand - Photonic noise source is coming together. We will test it up on MLO sometime next week.

Dish:

Kyle - Plan to do the beam pattern measurement soon since the weather is getting better these days.

Ming-Tang - The burnt-out dish is repaired and back in Taipei's lab.

Site:

Ming-Tang - Haven't received the formal quote from Ishii yet, also need to discuss with several inspectors as our construction consultant. Will discuss further with Paul Shaw.

Paul Ho - If the 3 bids come in on the same specifications, we can base upon that, choose the contractor, then we can work with the contractor, re-do the specifications if necessary. The 1st bid is really just selecting the contractor.

2-Element Prototype Testing: