

Minutes for AMiBA Engineering Telecon

Meeting Date: 27-Nov-2003

Participants:

Australia: Mike Kesteven

USA: Paul Ho, M.T. Chen, T.H. Chiueh, Ted Huang, C.J. Ma, Patt Ferdinand, Jeremy

Taiwan: Huei Wang, C.T. Li, West Ho, Eugene Huang, Paul Shaw

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

Outside USA Dial-in = 1 773 843 6301

Minutes Recorder: C.T. Li

[previous weeks comments](#)

I. New Action Items:

AI-27Nov03-1: Derek/T.H. Chiueh - Layout a testing plan for receivers, correlators etc. of the 7-element system.

II. Previous Action Items (still open):

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

AI-30Oct03-1: AMiBA office and lab space in Hilo -

Ming-Tang - Talked to Richard in CSO today. We can use their space, and some modification of the lab will be made to accommodate the compressor. There should be some extra space we can use, but we'll have to pay more.

Ferdinand - Found another office space very close to the Casey building. It's a 660-square-foot building. The total rent would be 1330 dollars, plus 300 dollars every 6 months for property tax. The rent for CSO building is 500 to 600 dollars a month. We will buy them some equipment in exchange.

AI-23Oct03-2: T.H. Chiueh and Bob - Sort out what to do next, and summarize what has been done so far (for prototype testing).

Ming-Tang - Tzi-Hong is doing the weekly test planning already.

AI-25Sept03-2: Ming-Tang - Volunteered to review all the specs as much as we can, and collect them into one place so that we can look them up.

Ming-Tang - I will start doing it with Derek.

IV. Miscellaneous Discussions:

MMIC:

Huei - NGST sent us the revised contract for us to sign.

Huei - Provided NGST the name of the person who is responsible for keeping all the MMIC while they're in Taiwan, will send an email to Paul Clenword to follow up as well.

Receiver:

Ming-Tang - Since we've solved the lab space in Hilo, we're ready to ship our 1st receiver.

Ming-Tang - Got a message from Todd that he is sending back our amplifiers. About the phase shifter, Warwick suggested that we take on the job ourselves because they're heavily involved in their 3mm receiver upgrade. Have asked him to provide us some information about the material, and procedure of their 1st prototype. We had the local machine shop make a noise couple. We're happy with the result. They're gold plating it right now.

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LO/IF:

Eugene - Sent the broken IF/LO module back for repair.

Correlator:

Derek - Sent out 16 correlator modules to Taipei. Will send 2 of 1st section IF modules later.

C.T. - Received power divider and equalizer boards from Compunetics, and started to put together custom power divider modules. Finished data acquisition board designs, will have the PCB company layout and manufacture them. Warwick sent out AT's control PCBs. Once we received them, we can start setting up the correlator computer.

C.T. - Got an email from Compunetics. They have shipped the power divider boards to us. Jackie has prepared the import document for it. Johnson is testing the Triquint MMIC packaged by Wisewave. Maybe sometime next week we can start putting together the custom power divider modules.

Platform/Mount:

Ming-Tang - There were two issues needed to be resolved - 1. Whether Philippe and Bob Romeo have agreed on the list of modifications they're going to do on platform? 2. Whether 5 days are long enough to finish those tasks?

Paul Ho - We should arrange a telecon with Philippe and Bob Romeo to discuss these issues. If we can't fix the platform in time, we have to consider the dummy ring for testing the mount.

Calibration System:

Ferdinand - Wait for the 2nd 60-cm dish, then we will install the calibration system and test it. We also talked about the phase calibration.

Ferdinand - We had one test done. Will write up a summary about it. Prefer to use two 60-cm dishes. Got an email from Kyle about phase modulation.

DC Power Distribution:

Site:

Paul Ho - People in Hawaii prefer to go with Taisei. Paul (Shaw) has the concern about the price differential between two firms (Taisei and Ludwig).

Ferdinand - Got a phone call from Ludwig. They will go on with another contract, and will be available in mid January next year.

Ming-Tang - In Hilo we don't have enough man power and contract management skill, maybe Paul Shaw can come over to with Ferdinand?

T.H. Chiueh - Found another contractor, introduced by neighbor.

Dishes:

2-Element Prototype Testing:

T.H. Chiueh - We observed that DC offsets follow a sinusoidal form with respect to path difference, which indicated that there is some signal common even when receivers were covered by absorbers. We also found that there is a small peak of LO output at 20.5 GHz. The power is 70dB down compared with the carrier(21GHz).

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Ming-Tang - To verify that, we need to locate a cleaner LO or a synthesizer to do the test again.

Eugene - The LO performance should meet the specs. The DRO output should be 20dBm, with spurious of power level -70 dBm, the -90dBc should be within the specs of DRO. Actually the fundamental frequency of the DRO unit is 10.5 GHz, with a doubler. Maybe we can replace the 10.5 GHz unit with a synthesizer to check the spectrum output at 21 GHz.

Ming-Tang - Is it possible to have the testing team to write a regular testing item list or a plan to let people know what is going on?

Schedule: