

Minutes for AMiBA Engineering Telecon

Meeting Date: 11-Dec-2003

Participants:

Australia: Michael Kesteven, Warwick Wilson

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

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

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Minutes Recorder: C.T. Li

[previous weeks comments](#)

I. New Action Items:

II. Previous Action Items (still open):

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

AI-27Nov03-1: Derek/T.H. Chiueh - Layout a testing plan for correlator system with 2 receivers

Derek - Circulated a plan for people to comment.

IV. Miscellaneous Discussions:

MMIC:

Huei/Paul Shaw - For the updated contract, we can have all the documents signed and send them back. Will need to transmit the amendment documents to RCUH.

Receiver:

Ming-Tang - Will take a look at the receiver next week. Have received some repaired amplifiers from Todd.

Ming-Tang - We're ready to ship one receiver. Would like to check on it in Taipei before shipping. Start assembling the 3rd and 4th receivers. Will proceed on making of phase shifters when receiving Warwick's message. Will receive the gold-plated coupler and test it then. Will do some further tests on the "oscillation" problem of receiver noise temperature, which is probably due to some mismatching along the signal paths.

LO/IF:

Correlator:

Derek - Have Peter pack and ship 1st and 2nd sections to Taipei.

C.T. - We are looking for the 2nd quote for the data acquisition boards. Data acquisition circuit won't fit in one 3U card. We have to separate circuit into two boards. We need to use 6-layer boards. The layout and processing cost for each board is about 2000 US dollars. One of network analyzers is broken. We were not able to test the IF components so far. We have signed up the equipment in EE NTU.

Derek - Will send one set of 2nd section to Taipei for figuring out cable routing between 2nd and 3rd section.

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C.T. - There will be two PCBs for data acquisition - one as phase switch /demod signal generator, the other for data acquisition. We should have them fabricated by end of this month. Have received AT's correlator control cards. Warwick will send me the control software that we can start working on correlator computer during this month. Hopefully we can do some initial tests on data acquisition with readout boards and readout chips. We can start integration and testing of correlator system in Feb. if all the components were delivered.

Platform/Mount:

Paul Ho /Ming -Tang - Bob Romeo was discussing with Philippe about the re-modeling. Bob Romeo can't get to Germany till the end of Jan. Romeo has done something to re-enforce the structure, which is not shown in Philippe's model. Bob Romeo agreed to give Philippe the information about the modifications he made. Have asked Philippe to circulate a weekly report.

Paul Ho - We had a meeting with Philippe and CMA. Philippe wanted CMA to do more modifications. Philippe and CMA will discuss more and CMA has to make additional plates, hopefully to be done in Jan. If CMA can't fix the platform in Jan., we still have to go with the dummy ring for testing the mount. Another possibility is to use some metal plates between the platform and the mount.

Calibration System:

Ming-Tang - The 2nd 60-cm dish has arrived, which is suitable for mounting the calibration system.

Site:

Paul Shaw - Waiting for another possible quotation for the site and project consulting.

Paul Shaw - Have contact the local Taisei branch. They asked us to contact the Taisei Honolulu. Has contact one architect in Hilo, who was immigrated from Taiwan. He would like to help us find a construction company or contractor. Ming-Tang will give some site drawings and specifications to him that he can provide us some quotation.

Ming-Tang - Have talked to him and gave him some drawings. He is a civil engineer. We probably can hire him as a project engineer to oversee the construction. Also talked to another general contractor introduced by Tzihong. Problem is that we don't have written site specifications yet. We should come up with one.

2-Element Prototype Testing:

T.H. Chiueh et. al. - It is possible that part of DC offsets come from LO spurious. We could try to remove it by using some resonant cavity filters. We still have the AMing of LO during phase switching. We made a LO at 21 GHz. However it is susceptible to environment, or power line. Another 10.5 GHz LO has strong spurious. DC offsets is much larger than the original LO.

T.H. Chiueh - Haven't had much progress due to the rain on the summit. There is a sidelobe at 21.5 GHz of LO output. It's possible that this 21.5 GHz sideband leads to some DC offset. This week we plan to create a clean 21 GHz signal to replace the LO. Derek and I were discussing whether to rent for borrow one signal generator. Will generate the weekly testing plan for prototype.