

# Minutes for AMiBA Engineering Telecon

Meeting Date: 03-Oct-2002

Participants:

Australia: W. Wilson, M. Kesteven

USA: B. Martin, T. Huang, K.Y. Lin

Taiwan: M.T. Chen, W. Ho, H.M. Jiang, C.T. Li, Y.J. Hwang, C.J Ma, P. Shaw, J. Han, P. Wu

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## I. New Action Items:

- 1) Clock >> Bob and Ferdinand: expect some quotations

Ferdinand now has a good idea about what is necessary for the site time standard. IRIG-B for platform, 10 MHz & 1 PPS for correlator, and some kind of time standard over IP for Darryl. He will work out the details and place the order.

*\*\*brown texts were from last week*

- 2) JPL's LNA test >> Ming-Tang will put together a schedule

Noise temperature test for JPL's LNA with receiver #3 will be performed in Hilo.

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## II. Previous Action Items (still open):

03-Oct-02-1: Test Schedule >> Bob: Expand schedule to include retrofitting of the following: new version 2 receiver, 4-lag correlators, 60 cm dishes, new DC amplifier and readout boards.

Waiting to see how we are doing on the current schedule. Expect some delay next week due to some logistic problems. Bob will expand and revise the schedule.

03-Oct-02-2: Correlator >> Derek: Reconfirm delivery date and quantity of 4-lag readout chip.

Derek is on vacation this week.

20-sept-02-2: Platform/Base >> Bob: Mike and Bob had some discussions about the calibration for the base. It was suggested that Bob begin a dialog with Vertex regarding this issue. It was also suggested to generate an interface document describing the drive of 3 rotational axis (look at draft interface doc from ALMA). This all has to be ironed out before the CDR on December 10<sup>th</sup> in Taipei.

Mount :

Bob and Philippe were discussing with Vertex on the mount about Soten? Jackscrew design. Bob and company will discuss more and come to conclusion by the end of week if possible.

Platform :

got some inquiry from CMA, had more discussion with Vertex, Alctel declined to bid, ARL will visit us in Taipei on Friday and bring their proposal to us.

Philippe started doing some modeling using Ted's drawing, just in case we don't like these bids.

Ted will also revise the drawing once his new computer is set up.

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The interface coordinate frame issues are not settled yet. Bob and company need to generate an ICD for the drive system.

There was some discussion about accepting late bids. It may not be fair to compare late bids with those that were on time because the late bidder had more time to study the problems. I believe the resolution to this discussion was to accept and compare only bids that come in on time. If necessary, we can go out for a 2<sup>nd</sup> round of bids giving everyone equal time.

12sept02-1: DC Power Routing on Platform >> Homin, Derek: Generate a spreadsheet of DC voltages and current necessary for each box.

On going, people are working on better numbers.

Homin sent out an e-mail along with a spreadsheet attachment, subject =DC power supply and consumption, date = Thursday 9/19/2002 4:21 PM. He is waiting for review comments and planning to update the collective numbers.

Just as a warning, the max currents as they stand right now are very high approaching 100A for one of the voltage rails for the 13-element system. It was pointed out that these are max currents and that our typical currents could be significantly less. We'll know more when we start measuring the typical current of the major consumers such as the Celeritek amplifiers. We may start looking into quiet switchers to handle these large currents.

A general scheme was set forth to cable the platform to support 13-elements. The 19-element cabling system will be added later.

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

12sept02-5: 60 cm Dish >> Ted, Philippe: Prepare contract to Dr. Ong.

The paper work isn't there yet, but it's not a problem.

12sept02-4: Prototype Mount >> Ted, Ferdinand: Ted to finish/send the counter weight drawing, Ferdinand to have it fabricated at Dayton Jackson in Hilo.

Done.

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### IV. Miscellaneous Discussions:

MMIC: See discussion above.

Receiver:

Testing the vacuum and new cold head for Receiver #3. RF testing with LNAs will be carried out in Hilo.

LO/IF:

Had a meeting with Prof. Chu, settle on schedule and interface issues, putting things together in December. Equalizer design is ready, waiting to be sent out for processing with designs from other groups.

Correlator:

First trial of packaging of Triquint's MMIC will be finished this week, and test it sometime next week.

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The design and layout of various power dividers (including the one with smaller connector spacing) has been completed. The boards will be sent out next week for processing.

### Dishes:

Platform/Mount: See discussion above.

### Site Issues/Network:

Tried to mount enclosures and put in electronics for prototype mount after concrete pads have been modified. More electrical breakers will be put in, move UPS into the dome, also put down some different conduits in next few weeks. Will have the electrical contractor to work on the outside work.

People have been trying focusing telescope.

Kyle has checked out the network. DHCP is working right now.

### Schedule:

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### **V. Other Inputs:**