

# Minutes for AMiBA Engineering Telecon

Meeting Date: 26-Sept-2002

Participants:

Australia: absent

USA: M.T. Chen, D. Kubo, B. Martin, J. Peterson, T. Huang, K.Y. Lin, F. Patt

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

---

## I. New Action Items:

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

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

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.

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.

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.

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

The counter weight is done, plan to take it up to ML this Friday and install it to the mount.

## Minutes for AMiBA Engineering Telecon

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

The PO will go out next week. Delivery is expected to be 100 days ARO.

---

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

20sept02-1: MMIC >> Bob: Call Todd Gaier regarding the status of the various MMIC devices. Is there a problem with the export license?

JPL amplifier: all the paper work is in place. 28 amplifiers will be delivered sometime in November (we already have 6 in Hilo?). Ming-Tang intends to install these amps into the 3<sup>rd</sup> receiver (prototype design #2).

Todd G. is interested in being involved with the installation of this amplifier into the receiver, tentatively scheduled for December 2002. Ming-Tang mentioned that the OMT will be available around November as well.

On a related matter, the paper work for sending Huei's students to JPL for testing has not been started yet.

20sept02-3: Correlator Mixer/Module >> Derek: Reconfirm delivery schedule for the 2 mixers (presently scheduled for Sept 27) and the two 4-lag modules (scheduled for Oct 31).

The delivery of the 2 mixers has been delayed to October 4<sup>th</sup>. The delivery of the two 4-lag modules is still October 31. Both of these items will be shipped directly to C.T. in Taipei for characterization.

---

### **IV. Miscellaneous Discussions:**

MMIC: See discussion above.

Receiver:..See discussion above.

LO/IF: No discussion.

Correlator: Derek - I believe we have resolved the issue with the BMA(f) connectors for the correlator modules. We plan to use a Suhner screw-in connector (not 2-hole) which has a 0.020 inch pin diameter. Jeff has to redo the module outline to take into account the 0.25 inch thread depth of the connectors at each end.

Dishes: See discussion above.

Platform/Mount: See discussion above.

Site Issues/Network: Kyle (K.Y. Lin) has checked out the network on ML. The network in the visitors building works fine for both static IP and DHCP settings. The network in the dome, however, does not work at all. Darryl knows about this now.

Ming-Tang, Ferdinand, Kyle, Ted: Concrete for rack pad has been poured. Will wait a few days to cure then plan to install electronic racks and power cables.

## Minutes for AMiBA Engineering Telecon

Ferdinand talk to Bob Oshida at ML regarding the 50A circuit. Bob is presently unwilling to provide this at this time. He may change his mind once he realizes that we will follow strict adherence to code.

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. Still need to identify electrician. Maybe Joshua?

Schedule: Paul H. asked what was likely to be the schedule driver for the 7-element system. Bob believed it looks to be the platform/mount, followed by the receivers & correlator system (tied). In regard to the platform/mount, Bob confirmed that he has looked at other platform arrays and is indeed not inventing things from scratch.

---

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

e-mail from Derek, Sept-23-2002, subject: 2nd Section Correlator Packaging, attachment describing mechanical packaging concept.

e-mail for Homin, Sept-19-2002, subject: DC Power Supply and Consumption, attachment describing tally of voltages and currents.