

Minutes for AMiBA Engineering Telecon

Meeting Date: 20-Sept-2002

Participants:

Australia: M. Kesteven, W. Wilson

USA: M.T. Chen, D. Kubo, B. Martin, J. Peterson,

Taiwan: C.C. Han, W. Ho, T. Huang, Y.J. Hwang, H.M. Jiang, C.T. Li, K.Y. Lin, C.J Ma, P. Shaw

I. New Action Items:

- 1) MMIC >> Bob: Call Todd Gaier regarding the status of the various MMIC devices. Is there a problem with the export license?
 - 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 10th in Taipei.
 - 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).
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II. Previous Action Items (still open):

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

In process. Tentative distribution voltages are -18 analog, -8 analog, +8 analog, +8 digital, +15 analog, +18 analog. Homin may want separate +/-18 for relays. Due by next meeting.

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

Fabrication work is in process at Dayton Jackson. ECD is September 27.

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

Contract is finalized, however still awaiting approval. Dr. Ong has some questions about a 3-D model. This item will be closed when the contract is approved.

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

12sept02-2: Optical Telescope >> C.J. Ma, K.Y. Lin: Now will be a good time to work on the installation and test of the optical telescope. Please make arrangements for travel.

Travel plans are in place. COMPLETE

5sept02-6: ML Network >> Derek: Has network dropout issue been solved? Talk to Darryl about this.

e-mail from Ferdinand sent after the meeting:
Derek,

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I talked with Darrel yesterday on ML and asked him about the Network dropouts. He mentioned that the connection is working fine and that Verizon must have fixed the problem. He was happy with the speed of the line. He also mentioned something about the new IP-addresses and you already have them in your last email.

Ferdinand COMPLETE

On a related note, Darryl has asked whether we would like to have DHCP. Mike K. answered with "definitely yes". Please also note that we have been assigned a new set of IP addresses (172.16.1.201 to 240).

5sept02-7: ML Network >> Protty, K.Y. Lin, C.J. Ma: Bob has asked that a material list be generated so that we can easily identify and order the network hardware.

See e-mail attachment below (in previous minutes) from Protty. COMPLETE

15aug02-3: Prototype Schedule >> Bob: Bob has generated and distributed a schedule of activities. Protty asked that network activities be added to this schedule. Ming-Tang also added that names be added to each task.

Bob has distributed a 2nd iteration of this schedule and was surprised that he has not received comments. This was followed by a fairly lengthy discussion of who was available to come to Hilo and when (Bob took notes on this). COMPLETE

15aug02-4: Prototype Mount >> Bob, Philippe, Ted, Ferdinand: The modification to the mount is presently in process at Jackson Machine works in Hilo. It is expected to be completed at the end of August. Open items:

- a) Ted/Philippe to update drawings to match modifications. Low priority, dropped as a background task. DROPPED

IV. Miscellaneous Discussions:

MMIC: Huei - TRW InP wafers, no problem with delivery of 28 LNA contract on time. We presently have 6 amplifiers here in Hilo.

Receiver:..Ming-Tang - West Ho may be ready to do a cold test on the 3rd receiver (modified dewer design) by the middle of October. Still needs to resolve mechanical interface issues between RF and IF sections. Cold RF tests may begin sometime in Dec 2002. Still awaiting OMT device (as well as a few other items?).

LO/IF: no discussion

Correlator: C.T.- Milton is working on making 2nd custom power divider equal length in propagation delay WRT to the 1st design. If we get this wrong then we can still make up for the differences in the external semi-rigid cabling which feeds these dividers. But we would rather have the exact same cables for both front and rear dividers.

Derek - Order for 15 SPDT terminated switches is in process. Selected Dow-Key as vendor. Major items still to identify and order are the phase shifter and slope equalizer. I spoke to Jeff R. regarding the BMA(f) connectors I've asked him to use. He is concerned that the 0.050 inch pin diameter will be a problem for him since he is interfacing to very narrow trace widths on alumina. I found another alternate BMA(f) connector with a 0.012 inch pin (same as he used on his original correlator) but this one mounts differently to the housing.

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Jeff P. discussed the issue about S. Padin's approach of matching his correlator mixers. Padin uses 50 Ohm terminations right across the mixer quad to present a controlled impedance to the balun. The balun now only functions to match the balanced to unbalanced lines. We on the other hand are still attempting to perform the match on the outside of the balun using a ~6 dB pad. I have instructed Jeff R. to continue to proceed in this direction to maintain our schedule.

Dishes: See open AI 12sept02-5 regarding 60cm dish contract. Bob wondered why a 3-D module was being used.

Platform/Mount: We received RFQ responses from CMA and Vertex. Bob was concerned that the vendors will be reluctant to commit to a fixed price without doing some detailed upfront engineering (not free).

Prototype mount- Mike asked what the resolution of the elevation gauge was - answer is 1 degree. Coarse elevation adjustment can be done with the steering wheel, however, there is no fine control. Mike suggested to use the mount as a lever to do fine adjustment. The optical telescope can be used for fine pointing.

Site Issues/Network: K.Y. Lin will be here next week and will test the ML network.

Schedule: See completed "AI 15aug02-3" above.

V. Other Inputs:

None