

## Minutes for AMiBA Engineering Telecon

Meeting Date: 05-Dec-2002

Participants:

Australia: W. Wilson

USA: J. Lim, Kyle Lin, C.J. Ma, D. Kubo, B. Martin

Taiwan: H. Jiang, W. Ho, T. Huang, C.T. Li, E. Hwang, Protty Wu

Minutes Recorder: C.T. Li

[comments from this week](#), [previous weeks comments](#)

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Brief prototype testing discussion -

Bob, Jeremy, C.J.: try FT of drift scan data, then looking at the output of each frequency channel, especially the DC term, which corresponds to the offsets

Warwick: due to the phase and amplitude error in current correlator modules, it (FT of data from lag domain to frequency domain) is not a valid operation. It might be better to concentrate on output from each individual lags, figure out sensitivity and offset

C.T.: tried using the transform matrix to take into account the phase and amplitude variations of each lag, then applied the inverse matrix on the fringe data from the translating noise source, it didn't work probably because of the fast amplitude and phase fluctuations of each lag in frequency

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### I. New Action Items:

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

21nov02-1: Alignment & Platform design: >>

Jeremy, C.J.: align the dish/receiver by looking at the fringe of the sun and shimming the receivers, right now two receivers are pointing within 3 arc-min. still need to align the optical telescope to the receivers (need to measure the offset between them as well)

Bob, Ravi: people still working on it, will circulate the discussion around, further discussion on platform/receiver interface during the CDR meeting is required

21nov02-2: Test log setup: >>

Protty: Evaluate or just purchase the discussion software

Protty: electronic log is setup on AMiBA data server, one copy will be sent out to AMiBA members via [amiba@asiaa.sinica.edu.tw](mailto:amiba@asiaa.sinica.edu.tw) (Check out names within the distribution list)

14nov02-1: Mount CDR & 7-Element Reviews: >>

Bob: has sent out the agenda to everyone, waiting for comments

Jeremy: will send out the future test plan for prototype next week

Bob: Organize and pin down dates for the Vertex mount CDR as well as the review of 7-element system.

A draft agenda sent out to few people for comments, will be circulated to everyone by end of week

7nov02-1: 60cm Dishes >> Bob/Philippe: The dish manufacturer is having some problems with the CAD drawings. Arrange telecon to discuss and resolve the problems.

Ted and Philippe will visit the manufacturer next week when they're in Taipei.

Has been discussed between Bob, Ted, and Philippe

Alon like to attend the CDR meeting. Paul will decide the arrangement.

Revision of drawing is done. Ted will arrange a telecon with Alon next week.

Ted has distributed some revised drawings and Philippe arrives in Hilo this Friday. Bob, Ted and Philippe will have a telecon with manufacturer before the meeting next week.

## Minutes for AMiBA Engineering Telecon

23oct02-2: Clock Drive Motor >> Ted/Ferdinand: Ted to characterize the torque for the clock drive shaft with the mount loaded. Thereafter, identify and order a motor.

Found another company in Taiwan to provide motor with proper gear reduction ratio and motor accuracy, will get a quote and specs soon

Ted had received a quote, will place the order next week

Ted confirmed the torque is constant for different mount orientations.

Need to think about ways to install the motor and connection with the mount.

Ferdinand are reviewing the specs. Ted and Ferdinand will place the order then. Bob envisioned that the motor won't be installed probably until Jan. or Feb. next year.

Torque with platform loaded is 7nm. Mike asked Ted to repeat the torque measurement over a larger angle to make sure it is relatively consistent. Ted mentioned that there are still some other issues to address regarding the motor.

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

7nov02-3: CW Source on Tower >> Derek: Make sure it is OK for us to radiate a CW signal in the 85-105 GHz range at ML.

Put it off until we actually need it.

Source is ready, waiting for someone to climb the tower.

Installation of radio transmitter is on the task list for the following weeks.

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### IV. Miscellaneous Discussions:

MMIC:

Receiver:

LO/IF:

Correlator: Derek, C.T., Jeff.: figure out the loss in response due to the impedance mis-match for the new mixer from Rapadas (the new balun has high impedance in order to match the 6-dB pad), and find out the delivery the 4-lag correlator modules.

Dishes:

Platform/Mount:

Site Issues/Network:

Hilo Facilities:

Schedule:

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### V. Other Inputs: