

## Minutes for AMiBA Engineering Telecon

Meeting Date: 30-September-2004

Participants:

Australia:

USA: Pierre, Kyle, Ming-Tang, Jeff, Philippe

Taiwan: Huei, C.T., West, Patrick, Homin, Steven, Paul Shaw

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Minutes Recorder: C.T. Li

[previous weeks comments](#)

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### I. New Action Items:

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

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

### IV. Miscellaneous Discussions:

MMIC:

Huei - Wisewave will finish the housing design by this week. We will fabricate them in Taiwan, and then send them with the MMICs to Wisewave for packaging.

Huei - C.T. will follow up with Wisewave about the housing design.

Receiver:

Homin - Rx#4 is still cold and temperature logging is on going.

Homin - Rx#4 has been cooled down for one week. Temperature is kept cold and monitored.

Ming-Tang - We should have some kind of monitoring system to send out alarm when temperature is off the range. Receivers in Hilo are also cooled down and behave quite normally.

LO/IF:

Homin - Madani has tried the control voltage module (for variable gain amplifiers) using Windows software. He is converting the software into Linux.

Homin - Steven is making more new version bias circuits.

Calibration System:

Kyle - I found some components to distribute the calibration signals at 13 GHz. The total cost is about 8,000 US dollars for 7 elements. It requires 2,000 dollars for expansion of an additional element. Whether phase drifting of receivers and calibration system can be de-coupled by inspecting the phase closure is still a question.

Kyle - The 7-meter IF cables cost around 150 US dollars, 10 times cheaper than the high-frequency cables. Since we're worried about the phase drift in the calibration system, we're discussing phase detection of calibration signals into the harmonic generators. We need to find sub-harmonic mixers when we distribute calibration signals at around 13 GHz. Phase drifting along the long cables from receivers back to the calibration source is another concern.

Jeff - For the calibration system, phase closure between receivers may provide some redundant information (N signals,  $\sim N^2$  correlations) to figure out the phase errors or drifting.

Correlator:

C.T. - Mark has finished all the wiring. We're going to power up the equipment for testing. We're also processing the shipping document.

C.T. - Wiring of corr 2<sup>nd</sup> & 3<sup>rd</sup> sections, including the 48V DC-DC converter module, is still on going. Mark should be able to complete it by this week.

Platform/Mount:

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Philippe - The hexapod has arrived in Hilo. We plan to ship the drive cabinet up to MLO soon. The cone has been cleared off L.A. custom, and will arrive around Oct. 20<sup>th</sup>. It's necessary to keep the temperature above 7 degree C in order to cure the ground for the cone. Bob Romeo has started to work on the platform. The shipment of the platform is around early next year. Vertex is concerned with the installation of hexapod without the platform. We're thinking of a dummy ring to hold the hexapod. We need the shelter before hexapod installation.  
Ted - The shelter company needs to test the new design of fabric. The shelter should arrive in late Oct. or early Nov.

Ming-Tang - The custom clearance document for the cone is available now, while the cone still stays in L.A. Philippe is in Hilo right now to take care of this issue.

### Dish:

Patrick - We did the measurement of the 60-cm dish outdoors on Monday night with the source set up on top of the building. We're still limited by the mount to do vertical scan, not the horizontal one when using the tracking mode of the mount. The setup is quite stable over hours. The resulting pattern is quite asymmetric.

### Site:

Pierre - The power distribution and network is final. I'll circulate them soon for comment. We're waiting for phone company to hook up the phone line.

Pierre - We are purchasing components to finish the power distribution and network.

Ming-Tang - Due to the hurricane and design change, the shipment of the shelter is delayed. The company has disassembled it and plan to ship it on this Friday. We will have a technician from the company to help on the installation.

West - Helix will provide the specs and documents for the compressor junction boxes.

### Administration: