Minutes for AMiBA Engineering Telecon

Meeting Date: 30-August-2002

Participants:
Australia: W. Wilson
USA: B. Martin, M.T. Chen, P. Ferdinand
Taiwan: P. Ho, C.T. Li, H.M. Jiang, W. Ho, C.C. Han, P. Wu, C.J. Ma

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I. New Action Items:

II. Previous Action Items (open):

15aug02-1: Platform >> Bob/Philippe: Complete bidding package for the platform. Bob has circulated 1st draft to Philippe, Ted and Paul for comments. This action item will be closed when it is agreed that the bidding package is complete.

Bob will update and circulate the RFP spec package for review. Various groups will consider whether the allocated space is enough for their electronics and other equipments.

15aug02-2: Antenna Coupling >> C.J. Ma/K.Y. Lin: Generate a test plan to characterize the antenna coupling. This test involves injecting a signal into one antenna and measuring the coupled output on an adjacent antenna. Ideas discussed:

A test plan has been generated (as attached below)
Science team needs to specify the acceptable cross-coupling level at the front end.

15aug02-3: Prototype Schedule >> Bob: Bob has generated and distributed a schedule of activities. Proty asked that network activities be added to this schedule. Ming-Tang also added that names be added to each task. I suspect this schedule will be an on-going item but I will close it out as soon it has been revised with the 2 requests.

Still on going. Bob will make these updates to the list of activities and distribute.
Site preparation will probably take 2 to 3 weeks.
Science team will generate a proposition paper for prototype testing in addition to engineering team's test plan

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
b) Ferdinand/Ted/Ming-Tang to investigate and solve "loose worm gear" issue.
c) Bob/Ming-Tang to determine where to mount the various components on the mount (should not be a problem).

This action item will be closed when items a), b), and c) are completed.

The revised machinery of prototype mount is done.
Ted will talk to the factory in Taiwan about the "loose worm gear" problem.
Ted will generate the drawing for the counter-weight. Bob will review it.
Science team needs to decide how accurate the pointing is going to be for prototype testing.
Need a Pointing test plan?

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15aug02-5: 60 cm Dish >> Bob/Mike K./Jeff P: Assignees need to discuss and resolve the following issues first via e-mail, then followed by a face-to-face meeting during URSI conference:

a) Modify design for focus adjustment
b) Discuss shield issue, look at report on shield describing worse ground pickup with cylindrical shield

This action item will be closed when items a), b), are completed

Bob has discussed with Mike during the meeting. Ted will revise the drawing.

15aug02-6: Mauna Loa Network >> C.J./K.Y. Lin: The network connection in the visitors building is up but drops out about 2 times per minute. Darryl of Mauna Loa is aware of this and will fix the problem on his end. The following items still need to be resolved:

a) Generate a list of tasks and hardware items to get the prototype computers networked properly.

Proty has circulate the list of tasks to set up the network (as attached below)

III. Summaries and Other Inputs:

From K.Y. Lin, 28-Aug-02

Gentlemen

Here is the cross-coupling test plan on mauna loa. there are some unsettled issue we can discuss at next meeting. please see details below.

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A) the test can be carried out on mauna loa with one of the receivers. As for the transmitter, we are planning to use the Millitech 90GHz Gunn(max +13dBm if this is not strong enough, we have another option, Jeff's Gunn +20dBm), Jeff's transition, and the new feed-horn (same as what we are using now) Cheng-Jiun ordered in July which should arrive in late September.

B) the receiver will stay on the platform of prototype mount. the transmitter can either be on the same platform with some custom bracket, or be on another custom made fixed mount looking at zenith. we will start design the mount upon decision.
(**) if we want to put the transmitter on the platform and do the coupling test before the system test so that the system is not disturbed after system test starts, we probably can catch the schedule by carrying the parts ourselves to mauna loa in early Oct. if it is prefered not to remove any receiver from the platform, then we can ship/carry the parts later and setup the transmitter beside the platform and do the coupling test any time after Oct.

C) the test procedure is straightforward. we point both dish to the sky and see the receiver output. insert an absorber between the dishes, and/or cover the dishes to see the effect. this should be able to finish in one day or one night.
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Kai-yang

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From Proty Wu, August-30-02

Hi,

As requested by Bob, I'm circulating the plan for the computer network on site. This is only a first draft, so please spend some time to read it to see if it meets your needs. Please send back your comments and suggestions by the coming Tuesday (Sept 3rd), so that we can have an updated version to discuss in the Thursday meeting.

Cheers,
Proty

PS: If you have received the attached file earlier, please discard this email because they are the same version.

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==================8/27/02
 AMiBA on-site PC network
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1. IP: around 40~50 (virtual; inside-out access),
       one of which can have outside-in access.
       This particular IP will be accessed
       a. by "amibadata" to download data for backup everyday,
       b. by off-site machines to monitor/control the hardware onsite.

2. Network cable: connected to both the office and the dome.
                  Use T1 to connect to the outside world.

3. Hub: a. 8 sockets x 2 (one for the office and one for the dome)
        b. 4 sockets x 1 (currently available but not used)

4. PC's:
   a. system monitor: to monitor the operation of the entire system.
      (already shipped with the prototype)
   b. correlator reader: to record the output of the correlator.
      (already shipped with the prototype)
   c. mount control: connected to both the mount and the optical telescope,
      to control the pointing and record the accuracy.
      (a notebook to be purchased; temporarily using Mike's or Ma's)
   d. backup PC x 2: prepared for any situations with other PC's.
      d1. One PC will be assigned with the IP that has the outside-in access.
          "amibadata" will access it to backup all data on site.
          Web access will be also setup.
          Once this PC is used to replace some PC that is out of order,
          its original IP will be given to PC "a" for the outside-in access.
      d2. The other PC will be idle, with a HD that has a backup of the OS of
          all other PC's.

5. Cordless network (802.11B):
   a. base: connected to one port on a hub.
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b. network card: installed on PC "c" (notebook).
This will allow a remote access of the notebook when it's hooked onto the mounting system.

6. Printer x 1: hooked onto the local network, shared by all PC's.

7. USB Camera x 1: mounted on but outside the dome, to monitor the prototype from indoors or from off-site.
It will take a picture every 2 minutes, and post it onto a password-protected web (PC "d1").

8. OS:
Linex for all PC's except for "c", which will run Windows
(because "c" has programs (controling the OT) that run only under Windows.)

9. Data backup system:
A script will be written on "amibadata", and automatically implemented everyday. It will download all data on all PC's onsite to ASIAA. The system will be designed to download "new" data only.
(The data here mean everything on the hard disks.)