VLB ARRAY MEMO No. 528

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NATIONAL RADIO ASTRONOMY OBSERVATORY
Socorro, New Mexico

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To: VLBA Computer Coordination Group
From: R. C. Walker
Subject: Jan. 28, 1986 Meeting Summary

Those present at the meeting on Jan. 28, 1986 were Benson, Burns, Clark, Cotton, Heald, King, Pearson, Romney, and Walker.

Bill Cotton reviewed the status of the Post-processing effort. Since he has been out of town for several weeks and is the only one actively programming in this area, there has been little progress since the Fall. Many of the low level u-v data handling routines have been written but no applications code is available yet. There are still some uncertainties over details of gain tables etc. that need to be settled. Despite the lack of recent progress, there should be no problem having a system up and in use well before VLBA data becomes available. Meanwhile Ed Fomalont has been investigating Geodetic/ Astrometric software.

Pearson asked about the distribution format. He is reluctant to put current data into a format that may change because of the risk of having tapes lying around with an out-of-date format. It was pointed out that the uncertainties are largely in the area of gain tables etc. The visibility format (FITS) should not change and is the main thing needed for current data. It was also noted that the problem could be handled by keeping the original tapes and maintaining a translation program that would put the data into the distribution format or directly into the AIPS internal format.

Barry Clark reviewed the Monitor/Control project. He has been working on the software for the special co-processor that will be used between the site computer and the M/C bus. Much of that software is written but not debugged. He is also working on a PASCAL program for the antenna test controller. Dale King has been working on software for antenna pointing. It was pointed out that the system will only accept coordinates in J2000. Anyone objecting to this probably should have said so already. Ron Heald has just joined the project. He will be working on the display screens for the Technician and Engineer interfaces. He is currently investigating generic screen routines to try to insulate the system from terminal hardware changes.

The hiring delays and budget constraints have made it very unlikely that everything desired will be available in time for the system tests or for initial Pie Town operation. Specifically the screens are unlikely to be ready for the system tests and the

monitor data handling facilities are unlikely to be ready when they might be wanted. One more programmer is still needed to deal with the remote operation but the budget may not allow any more hires. If so, the first remote operation will be delayed.

The choice of the control computer is waiting for decisions about peripherals, for expected announcements of new VAX's from DEC, and for the dust to settle over the budget.

Next month, we can expect to discuss operator interfaces.

Jon Romney said a few words about the correlator project. Not much is going on in the correlator computer area. Most correlator effort is focused on the choice of the architecture of correlator.

Benson, on prodding from Romney, opened the question of whether the choice of VAX/VMS was the right one for the control computers. He has been impressed with the UNIX system on the Convex. King seconded the support for UNIX but Pearson pointed out that one of the reasons that VMS was chosen was because of better support for on-line applications. There seemed to be little support for reconsidering the decision at this time, even from Benson.

Pearson gave us an update on the status of the Block II correlator. That correlator, used either on Mark II or Mark III data, is likely to be a major source of the data that we use to check out and gain experience with the post-processing software in the pre-VLBA era. He indicated that the control functions for the Mark II capability are working but that fringes are only obtained on some baselines thanks to bugs in the correlation hardware that have not been found yet. He expects to be processing up to 9 stations Mark II data within a month or so and to have the system ready for outside users by May or June. The Mark III capability should be available on about the same time scale. The Mark III capability may be delayed because no one at Caltech is pushing it scientifically.