

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia
1985 March 25

To: Coordinating Committee
From: P. Sebring
Subject: CC Meeting Notes, March 22

Participants

NRAO-CV: Hvatum (Chmn.), Porter, Thompson, Sebring, Burns, Cotton,
D'Addario, Balister
-SOC: Horne, Clarke
-VLA: Bignell, Napier
-GB: Kellermann, Peery
Haystack: Rogers (from FCRAO Quabbin)
Caltech: Ewing, Fort, Benson, Romney, Seling, Pearson

1. Budget.

Hein said that the "hold" on new commitments, including RFQ's, that we have been enduring has now been extended, thanks to Mr. Boland, from April 1 until May 15. This includes positions we had planned to fill on the earlier date. Funds to more or less preserve the status quo in the interim have been promised by NSF, since our '84 funds are all committed.

He said it appears the most likely funding scenario is \$9M in '85 and '86 (current dollars) and then the same annual sum escalated 5% per year beginning '87. Budget plan bud26, based on this scenario and calling for a 1-2-2-2-2-1 antenna vs year commitment beginning '85, has been submitted to and discussed by NSF. In bud26, the philosophy is to slow everything more or less uniformly to conform to the reduced funding, with the full VLBA completed in 1992. Earlier VLBI results could be obtained from completed antennas by processing the tapes at Haystack, on the Caltech Block II, or elsewhere.

Dr. Bloch, director of NSF, requested an alternate plan, under the same funding guidelines, in which the Correlator and Control Center would be finished earlier, reflecting his feeling that more "early science" would be made possible thereby. A plan, bud30, was therefore made. In order to complete the central facilities by '88-'89 (about as fast as we feel they can be developed) it was necessary to schedule the antenna commitments vs year on a 1-1-1-1-1-2-2-1 basis. An operable VLBI system results by '89 in this fashion, but with only 4 antennas. Others would be phased in as completed, yielding the complete VLBA in 1993! The total cost of this plan would be \$3M higher than bud26. Dr. Vanden Bout has written a letter submitting this plan but recommending strongly against it.

2. Action List.

2.1. M/C Std. Interface Spec. Clark says he has finished this item as of today, March 22.

2.2. Spec M/C/Corr Language & Op. Sys. Ewing & Clark say this is effectively done. Correlator group positions have been set forth but not officially blessed. New date, March 26.

2.3. RFI Ft. Davis start. Napier confirms this has been started.

2.4. Choose Microcomputer devel systems. Haystack's choice of the emulator for their H-P system seems to have been accepted last meeting. New date for Clark/Ewing to agree, March 26.

2.5. Decide use of AT Chip. Ewing says they have the reports on the chip, and tentative decision is not to use it unless somewhat upgraded. From Napier's report of his discussions in Australia, it seems clear that the prototypes will run at 16 MHz (tho' spec'd @ 12). As is, it should cost \$34US. Marty says price is attractive, but we'd have to have a spec of 16 MHz (he'd like 18), and this would surely elevate the price.

It was recommended that a Telex be sent to Australia indicating our interest in the chip and requesting cost and availability against a spec of 16 or 18 MHz. Peter and Marty will work it up, and it will come from NRAO because of our working relationship with CSIRO. Marty says that unless the answer is satisfactory the decision should be negative. The gate array approach now underway by Caltech involves well-known technology. A design around the AT chip would be a kluge, the only reason for which would be cost savings.

Larry and Hein each expressed concern over the time required to make the decision in this matter. Should the bud30 plan be forced on us by NSF, our time to evaluate use of this chip would be quite limited.

2.6. Pie Town Schedule. I reported visiting Green Bank to work out with Buck the logic and job durations for a PERT schedule for the construction of the Pie Town Station, phased into the contract dates for the delivery and erection of Antenna #1. I must now try to phase in subnets for other subsystems, for which I have very little data.

2.7. Pulsar support modes. Rogers has issued a draft. When comments on this have been received and taken into account, the memo will be reissued. Larry felt the draft should not have been issued under a formal VLBA memo number until it was final.

The item was renamed "decide pulsar gate implementation", since Marty and Alan must decide whether the gate will be in the DPS or the Correlator. Date, May 1.

2.8. 2-18 GHz breadboard tests complete. New date, May 1.