

VLB ARRAY MEMO No. 158

Minutes of VLBA recorder group telecon meeting held 7 Dec 82 at 1430 EST.

Attendees: A.E.E. Rogers - Haystack
H.F. Hinteregger - Haystack
J.C. Webber - Haystack
M. Ewing - Caltech
R. Escoffier - NRAO
R. Lacasse - NRAO
C. Walker - NRAO
K. Kellermann - NRAO
H. Hvatum - NRAO
A. Yen - Toronto

The meeting started with a general discussion of the 3 recorder/processor interface definition memos (#s 137, 140, 142). Craig Walker and others expressed the view that the choice of recording format should be completely independent of the recording method chosen. Hans Hinteregger and Alan Rogers argued that while the recording format should be independent of recorder choice it may well depend on the channelization. Ken Kellermann was optimistic that the scientific group will be able to resolve the channelization debate. Hein suggested that the authors of the interface definitions should meet via telecon and try to agree upon a mutually acceptable definition.

Density enhancement - Honeywell recorder:

Marty Ewing reported that the JPL contract with Barger is proceeding, although it is somewhat behind schedule. The head chips have been received and are now being tested.

Hans reported that his efforts to narrow down the tracks of a standard Honeywell head stack using a precision dicing saw (manufactured by DISCO) have been moderately successful. Track definition is good but the SNR performance is inferior to the VHS heads largely due to a shunting of the magnetic circuit by the head shields. Hans also reported that his efforts at Honeywell to manufacture a head stack using Japanese "gap bars" may be about to be successful.

VCR recorders:

Ray Escoffier reported that he is planning to visit Alan Yen to obtain all the details of his 12 Mbit/sec system, so that it can be duplicated at NRAO. Ray will be proceeding with the plan first proposed by Marty to deploy several 12 Mbit systems around the VLBI network in order to obtain some operational experience with high density VCR. This proposed system now has the blessing of the VLBI consortium as a future upgrade of the MK II.

There was considerable discussion of various variations of the VCR technology. For example it was suggested that higher data rate machine, like those used to copy VHS tapes, should be examined. Hans suggested that a 2 channel VHS recorder could be built by mounting 2 pairs of narrow track heads around the scanner. It was suggested that the apparent bandwidth superiority of the Betamax machines reported by Alan Yen be further investigated. Hans pointed out, however, that the Betamax tape cassettes contain even less tape than the VHS cassettes.