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NOTE TO F [] : : : :

20 November 1968

Relative to NSA Meeting with Lt. Potts & Wales plus NRL.

1. []

Chas. Cram suggested in an internal NSA Memo that they did not care which color uniform the operators of the SISS ZULU positions wore in the [] site after FY-72, but since it seemed to be a sellers market maybe the Service which wanted this job the most, would be amenable to [] funding the Field Digital System..... This is an interesting possibility but I do not think that this type of Horse-Trading is necessarily the way for this program to decide the best working and manning situation for any site for the Long Haul.

2. Mr. Ronald Potts gave 1½ hour summary of how [] goes about their location procedures, emphasizing the high degree of confidence which has been attained in their results. He did give the priority of their effort: [] signals, Unknowns and then Ship signals...the latter because they are of interest to the NAVY but he pointed out that as yet there was no customer for the ship locations. He indicated that to date [] locations had been made with about 3/4 of them being ship targets.... [] for HEAD NETs was briefly mentioned giving NSA Credit for the original work and saying that to date [] had been cited in the locations with some locations which were not covered by the earlier NSA []

3. NSA major response to all this was repeated questioning on the part of their mathematician, [] as to the Confidence Area associated with each of [] locations. He could not understand that the luxury of bringing along a tedious Statistical treatment of each observation was not possible with the limited instrument in [] nor was it meaningful in face of the uncertainties of payload ephemeris. He did say that NSA accounted for the ephemeris uncertainty by assuming that the real payload location would be within an ellipsoid of revolution whos major axis was along the flight line and measured [] with minor axis perpendicular to the flight line and measuring [] This is the first time that this has been brought to my attention. The answer to the Confidence Circle question was not complete from our program's point of view because Mr Bob Daniels of HRB Singer must provide the NSA Mathematician with the full story. IT IS OBVIOUS THAT NSA WILL NOT ROUTINELY PUBLISH [] OUTPUT LOCATIONS UNTIL THEY HAVE A QUALIFIED STATISTICAL [] OF CONFIDENCE ASSOCIATED WITH EACH ONE, or perhaps a general proof that all are better than [] unless otherwise limited.

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4. The meeting broke into two parts at about 12 O'Clock with Lt Potts Lee and Dick Wales going to the Manual Processing area and four of the rest of the group going with Dick Smith (Stan's Replacement) TO the Computer Machine processing area for a very excellent walk through. The most exciting revelation here was an IBM Data CELL, 2 millisecond access device which had pieces of Mag Tape about 10 inches long held vertically and ~~xxxx~~ along the axis of a cylinder. Each piece of tape could hold 40 million BYTES as compared to a CDC Disc holding only 130 Million BYTES. The IBM device must have had sever hundreded strips of tape so it could replace a couple dozen of the CDC Disc Pacs. Our data was being processed while we were there and the operators could watch the CRT displays and monitor the computer as it worked its way through the tape.

5. Summary:

It was a very satisfying meeting in that the people all spoke of the positive side of this program and all were apparently sincere about maintaining the improved communications and expanding it to include the operational sites. All Program ELT publications now will go to [REDACTED] and when [REDACTED] gets its system they will be on distribution too. They were all highly complimentary of Lt Potts and in the clear manner which he presented the work that they perform. It is highly probable that his confidence will be contagious; it is too bad that Ray POTTS was not there because he still looms as a bottle neck in getting the [REDACTED] outputs on the street.

Lt Potts after the visit indicated that the techniques used by NSA and [REDACTED] are very similar and that [REDACTED] does not any longer need [REDACTED]
[REDACTED]

Several high important signals were discussed relative to this program's contributions and the details of the [REDACTED] analysis Lt Potts was outstanding in his recollection of these details and in exuding confidence as to their techniques and assumptions,

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