MEMORANDUM TO FILE . . . . . 30 March 1970.

~~SECRET~~ [redacted]

Subj: NRL Briefing to NRO staff relative to the Acceleration of 7107:

1. The major emphasis from this unfortunate meeting was that we must have the cost elements fully identified before the decision can realistically made one way or the other...they are extremely sensitive to any intensification of costs during the next FY-71... They also want the West coast implications to surface so the decision can be clean and not uncertain.

2. [redacted] pitch about emphasizing the capability that POPPY has which they can not get from any other Mission is too trite and we have heard all about the concern that this office has voiced before about getting POPPY to drop the coverage [redacted] It is completely inconsistent with the ~~xxx~~ USIB collection guidance that directs all NRP Programs to simultaneously collect (and process) the data from a TOTAL weapon system not just one piece at a time. The logic of this is what will ultimately identify the changes of these weapons systems as they go through their respective evolutions. It will also assure the earliest possible discovery of NEW or Unusual emitters or components of a larger Weapons System. We must not take the argument as too great a threat because all the honest taxpayers will back us up if given an impartial hearing.. [redacted] has a charter but until it has demonstrated its ability this charter is not Exclusive!

3. The development of the FY-71 Budget estimate for NRL must reflect:
additional personnel on team at 5614
Changes in the Security Clearance situation E vs TK.
Computer at NRL for analysis effort
[redacted] In-Flight assessment effort.
A-to-D systems for [redacted]

~~SECRET~~ [redacted]

HANDLE VIA BYEMAN-TALENT CONTROL SYSTEMS JOINTLY

ELEMENTS NECESSARY FOR SORS BRIEFING ON ACCELERATED 7107 CONCEPT:

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The audience will be far differenct from that experienced with ADM. Harlfinger, Dir Prog "C", and therefore one must anticipate their information needs:

1: Latest explanation of the Failure of two spacecraft from Mission 7106.

2: Impact of these failures on the overall operational capability.

3: Clear description of the concept for Mission 7107 which has been APPROVED...

A-Basic areas where the state of POPPY art was to be extended.

1- Use of Stored Command...increase versatility, reliability increase time for data taking, and give command roll at

2-

3- New Spacecraft Structure
This will double available power, reduce the volume restraint considerably and give better thermal design inside bird.
Additionally it will be a step toward another Booster.

4-

B- Schedule for Approved concept will be longer than generally known this is apparent due to the slow start and the lost momentum following the last launch and the Autopsy effort on the recent failure.

C- Costs for Approved concept will be somewhat higher than generally anticipated due to the nature of the effort and the extent of redesign that will take place.

4: Proposed Accelerated concept for mission 7107, description of.

A-Generally it is to take the old spacecraft structure and put as much of the approved concept into it as power and volume will allow.

B- Schedule

C- Costs

~~TALENT-KEYHOLE-COMINT~~ CONTROL SYSTEMS JOINTLY

5: Comparison of the trade-offs between Approved and Accelerated

A-Features
B- Schedule
C- costs
D- Impact on current Operations.
E- Impact on Future of POPPY(costs and capability)....

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BYEMAN ~~TALENT-KEYHOLE-COMINT~~ CONTROL SYSTEMS JOINTLY

HANDLE VIA

NRL Problem 56R06-29.... Launched Mission 7106 into perfect orbit and even with Boosteer explosion on Rev 57 and early transmitter power level problem on 7106D the Mission met our expectations until Rev 2054 when Delta Bird died and then less than ½ Rev later 7106 Bravo died....the Unique Address (four pair of tones) will not go through the command system as though a locally generated RFI was holding one of the relays over tight...100% sunlight is due on 18 March and might provide the reduction of RFI level that would allow us to secure the Telemetry Transmitters the most likely source of an on-board RFI signal.

This premature loss of two of the most recent spacecraft have prompted us to conceive and propose an accelerated concept for Mission 7107 (QRC) that would have the majority of the ELINT coverage of the Standard concept except the major long-time development items would be dropped or possibly carried along (time permitting) in an R&D Spacecraft. The greatest disadvantage of the QRC concept is that it would inhibit the Laboratory from gaining on the State of the POPPY Art in those areas of Structure, Stored commands and use of the [redacted] collection systems....some of these might be ready in prototype for use in the R&D spacecraft though to minimize this disadvantage.

Our Plan is to SELL this concept up through Dir Program "C" and NRO by briefing so that the approved concept can be modified without a major adjustment of either $ or paper documentation.

The first speaker this afternoon is Mr. Vincent S. ROSE, the most essential member of our effort at the Naval Research Laboratory...the man who prepares all of the ELINT Collection sub-systems for each of our Launches He will describe some of the efforts which go into the preparation of these subsystems and their documentation for community use operationally...Mr. ROSE

The Next speaker will be Mr. Terry FISHER one of our two most outstanding young engineers who is providing the NRL expertise in a very critical part of our overseas systems development...That of the Buffered Tape System... This instrument is now in the first generation(Commercial) deployed and has been operational for nearly 3 years...but there are many inadequacies to the existing system...NRL now is providing the engineering design responsibility... Concievably several of these will be used at each site so that any [redacted] data sorts can be indivdually recorded For instance the [redacted] signals of ARMY interest on one tape and the [redacted] signals of Navy interest on [redacted] tape using a separate BTS-----Mr. Fisher

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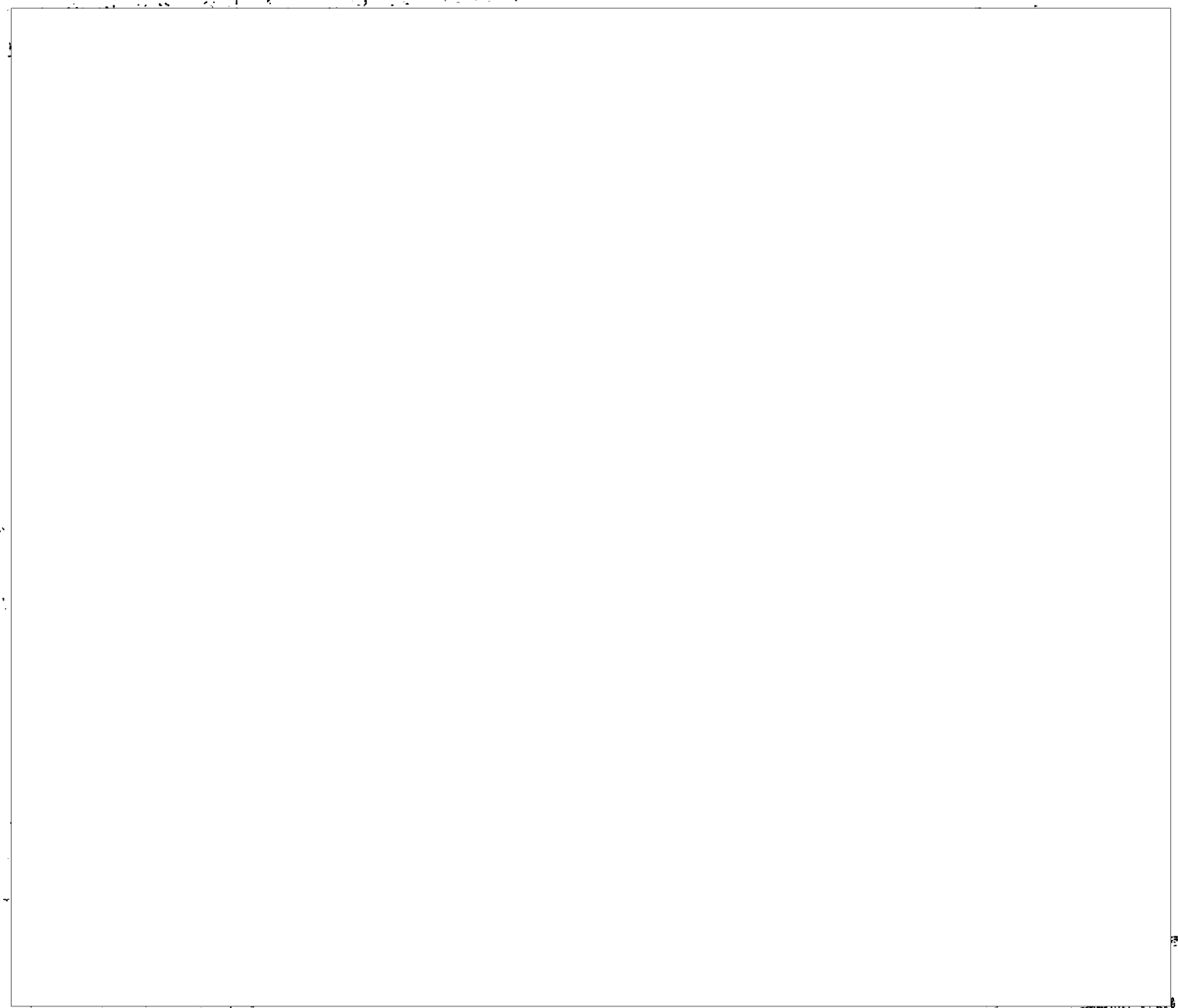
The Final Speaker for our presentation today will be Mr. George Price, the other outstanding young engineer in our group. He will discuss several areas of our work where the design responsibility has been executed by the NRL team as opposed to the contract team at HRB-Singer. Mr. Price has been pushing back the frontiers of system design for the overseas data collection sites but this afternoon he will confine his remarks to the Channel "A" (Housekeeping Telemetry) receiver design, the Quality Control Analysis (Unified)complexx and the Automated (Computer) controlled antenna aiming system which is being developed at NRL. The final item in his presentation willbe the proposal for a computer controlled Test facility for testing various rf components for quickly and reliably selecting them into matched sets to help Mr. ROSE in his sub-system preparation.



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