

CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D. C.

4 NOV 1965

MEMORANDUM FOR: Director, National Reconnaissance Office

SUBJECT: CIA Comments Concerning Alternative
Management Arrangements for the
New Photographic Satellite Search
and Surveillance System

REFERENCE: BYE-36887-65, dtd 27 October 1965

1. I have your request of 27 October for comments on the alternative management arrangements for the New Search and Surveillance System and welcome the opportunity to do so.
2. There are two basic choices before us, the first is how to divide the responsibilities for development of the payload and, secondly, the way in which the Air Force and CIA will collaborate in executing assigned responsibilities for the program. Should you decide upon a single project director to manage the new project then a third decision emerges, namely, whether the Agency or the Air Force should have primary responsibility for it.
3. The most important factor to be considered in carrying forth programs under the new National Reconnaissance Program is the desire of both the DOD and the CIA to insure that the full and creative participation of each organization is totally exercised as responsible contributors.
4. A review of the various NRP satellite reconnaissance projects readily demonstrates the magnitude of the Air Force's efforts since it remains totally responsible for GAMBIT, G-3, [REDACTED] QUILL,

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██████████, Project 417, and several research and ██████████
such as the ██████████. Additionally, it shares with the Agency divided
responsibility in CORONA, a most successful project. The New
Search and Surveillance System must then be looked upon as one of
the few remaining elements of the NRP in which CIA can participate
and contribute in a major way.

5. We agree with the report of the Management Task Force
that it is undesirable to have the New Search and Surveillance System
managed from within the NRO Staff itself. We also concur with the
Task Group in rejecting an Integrated System Project Director which
then narrows the choice between a single SPD or a split responsibility
such as we have in CORONA. There is sufficient analogy between
CORONA and the New System in their subsystem definitions which
suggest that the New System could be managed successfully on a joint
basis. The excellent record of the CORONA system is indeed a tribute
to the individuals who have participated in it. Defined roles and
responsibilities which heretofore have been lacking in CORONA would
materially add to a comparable success in the New Search and
Surveillance System.

6. I am aware of your strong desire to have a single organization
to be primarily responsible for the overall management of the New
System. If such a single management scheme is to be chosen, then
the case for assigning that responsibility to CIA is compelling.
You will recall that the concept for this system was born out of a
CIA-study program initiated as far back as February 1964. In June
1964 the results of this study and a preliminary design of the system
was submitted to a panel of independent experts headed by Dr. Edwin Land.
Upon the recommendation of the Land Panel, a feasibility effort was
undertaken and a brassboard of the film transport system associated with
the camera was built. It was not until August of that year that the Air Force
undertook competitive efforts. Since the NRO Agreement assigns to the

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Central Intelligence Agency the responsibility for developing the sensor system for the New Search and Surveillance System, and further, states that the design requirements of the sensor should receive primary consideration in the system specifications and design of the other subsystems, it is logical that the Central Intelligence Agency assume the responsibility for project management.

7. Additionally, there are three items concerning the assignment of responsibilities as outlined in the referenced report which require further comment. The first of these items concerns system engineering and system integration. Regardless of the management arrangements decided upon, we feel that it is essential that specific constraints be placed upon the overall system engineers and overall system integrating contractor. For example, should CIA let the overall system engineering contract, its system engineer would look to a subsystem engineering group in the Air Force, presumably Aerospace, for necessary interfaces with the subsystem components assigned the Air Force and not attempt to interface with the Air Force contractors directly. To do otherwise would, in fact, place total program direction and managership in the program office and dilute the assignment of responsibilities granted each agency. The major on-orbit subsystems, the Orbit Control Module and the Sensor Module, as defined by the Technical Task Group have a relatively clean, well defined interface which can be most efficiently handled by direct interaction between the two responsible subsystem directors and their supporting systems engineering groups without the direct intervention of a third group. We in no way wish to imply that overall system engineering and system integration will not be necessary, but it is important to clearly delimit the degree to which these activities impinge upon the responsibilities assigned to the other Government agencies.

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8. The second item concerns the identification in the management plan of "Recovery Vehicle Module." The Technical Task Group which was charged with formulating an overall system description has concluded that the system should logically be divided into only two major subsystems excluding the boosters, namely the Sensor Module and the Orbit Control Module. The recommendation to you is unanimous that CIA be responsible for the Sensor Module which according to the Technical Task Group includes what the Management Team termed the Recovery Vehicle Module. In the light of CIA's considerable experience with CORONA, we are strongly persuaded to endorse this position, particularly in view of the fact that the integrity of the film path from supply to take-up is essential for system reliability. Assuredly the system integration of this payload package as well as its check-out and validation should be the responsibility of the Agency. It is recognized that the re-entry vehicle shells could be procured by either the Agency or the Air Force and supplied to CIA for integration. The design parameters of the RV itself are so dependent upon the demands dictated by the sensor system that it would make sound managerial sense to assign the responsibility for the development and procurement of the recovery vehicle to CIA. If these recovery vehicles, however, are to be employed in other programs, managed primarily by the Air Force, then a good case can be made for Air Force procurement for this program.

9. The final comment is directed to Section IV, paragraph e. In this paragraph the recommendation is made that the Orbit Control Module contractor should also build the Sensor Module structure (under contract to OSP/CIA) and also perform as the system integration contractor. It is our feeling that, while this arrangement may turn out to be convenient, it is not of critical importance that the OCM contractor assume these two additional tasks. From a

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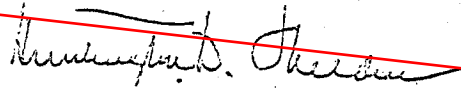
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structural view point the interface between the SM and the OCM is little different than the interface between the OCM and the booster, but it is clearly not essential that the OCM contract be given to the booster contractor. With respect to systems integration, it may well be more economical and expedient when the overall hardware flow is examined in detail to assign this function to the booster contractor. While we are not pleading any particular arrangement, we do recommend that these determinations be left, with Director, NRO concurrence, to the program management.

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HUNTINGTON D. SHELDON
Director of Reconnaissance, CIA

cc: DD/NRO

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