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CORONA

DEPARTMENT OF THE AIR FORCE
WASHINGTON

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OFFICE OF THE UNDER SECRETARY

May 25, 1960

MEMORANDUM FOR THE CHIEF OF STAFF

SUBJECT: Exploitation of Initial SAMM Data

As you are aware, the question of operational command, operational facilities and user relationships for the SAMM reconnaissance satellite continues to be a matter of considerable discussion. The RSD program, after numerous oscillations and after transfer of responsibility from AUSA to the Air Force, is comparatively stabilized. The present RSD program consists of twenty-five flights; these flights will include two different types of photographic recon payloads, one photographic recovery payload, and three Surret payloads of increasing complexity and capability. There is considerable technical uncertainty as to the character and quality of the information that may be obtained by these different payloads and the operational interest and the character of the initial operational program will be, in my opinion, strongly conditioned by the results of the RSD program. A very elaborate plan was originally conceived for the operational control, data handling, data utilization, data volume, and data display elements of the SAMM and RSD operational systems. Approval of such a plan and authorization for expenditure of funds towards the implementation of such a plan has not been forthcoming not only because of questions as to command and user relationships but primarily because of concern that the assumptions on such items as technical capabilities, schedules, data quality, frequency of coverage, payload reliability and lifetimes, computer requirements, optimum camera types, etc., are open to considerable question and can affect in a major way the type of operational system that will ultimately be required.

Complete answers to most of these questions cannot be obtained other than through the experimental flight program. There is some reason to believe that recovery rather than recon may well turn out to be the primary means for satisfying the bulk of the operational requirements and the ground complex required for handling such data will be enormously simpler than if complete reliance is placed on recon.

I feel it very important, therefore, that we should endeavor to achieve the earliest flight data for the different payloads with priorities in the order: photographic recovery; photographic recon, Surret. Consideration should be given to possible delaying elements, added insurance against such delays and, specifically, to the desirability of introducing into the program an additional payload type, such as an advanced panoramic camera, which, with recovery, could provide broad coverage with comparatively high resolution.

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I feel that it is desirable that we make provision to handle in a reasonable fashion any operational take from the R&D flights. This could be considered either as an interim operational capability or as an augmentation to the R&D capability, but with Air Force personnel rather than contractor personnel responsible for the operation. I would like to request that a plan including facility details, schedules, costs, manpower, etc., for such a capability be prepared and submitted for consideration. I feel that the ground rules specified below should apply, although deviation for valid reasons can, of course, be considered:

- (1) Initial readout limited to two sites.
- (2) No wide-band data links except Vandenberg; [REDACTED]
- (3) No provision for alternate satellite control centers; control to be exercised originally from [REDACTED]
- (4) Provision be made in the IOC only for essential elements of Subsystem I. Complexity and computer requirements introduced into this subsystem as a result of ferret payloads should be carefully reassessed. Very limited value of possible data from at least F-1 and F-2 payloads militate against sophisticated data handling system. Subsystem I appears to have been greatly overengineered, at least for the ferret aspects of the program.
- (5) Computer programming problems, schedules and computer requirements for photographic readout payloads should be re-evaluated to determine whether it is reasonable to anticipate extensive predetermined selective area coverage on request by intelligence in the R&D flights now scheduled. IOC facility requirements should be planned accordingly.
- (6) Capability to handle one operating readout satellite at a time appears adequate.
- (7) System should be planned to permit growth in capacity if R&D program results are promising and decision is to primarily utilize readout route.
- (8) Processing capability should be adequate for physically recovered as well as readout data.
- (9) Personnel staffing and training should be geared to the modified program. The present activities in this regard appear to be completely out of scale and out of phase time-wise.
- (10) Recommendations should be included as to desirability of introduction of a suitable panoramic camera payload development into the program with associated schedules and costs.

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It would appear that there is a merit, if there are no compelling reasons otherwise, to locate this first activity in the area where it is desired to establish the final operational facility and control center. At present, the planning is to use a very small portion of the old Martin bomber plant in Omaha. Overlapping control systems for NIDAS and SAMOS were planned at this location. The Commander of NEDAD believes this is unacceptable and that NIDAS control, console, display, etc. must be integrated in a common location with other air defense subsystem elements such as those related to SAMOS.

There are, therefore, open questions of the following type:

- (1) Should we plan ultimately to establish the complete operational data handling, display and control elements of SAMOS and NIDAS at the old Martin bomber plant?
- (2) If not, or if there is serious question as to such desirability, is it sound to reactivate a minute area of this large plant for the IOC equipment?
- (3) Should the entire complex be considered as basically a "protective" operation with survivability of all or part of the equipment of little importance? If not, burdening or redundancy, or both, should be considered.
- (4) Is it necessary or desirable to collocate data handling and processing facilities with future control centers and should the SAMOS and NIDAS control centers be integrated?

I hope that a definitive interim operational plan along the general lines noted can be developed at an early date, as well as any recommendations for an augmentation or modification to the R&D program. I am confident that endorsement and full support for such a program by the JCD will be forthcoming. I believe it very important that we obtain the appropriate experimental data at the earliest date possible and that this information will be the best possible basis for the definition of the ultimate operational facilities. The interim setup should permit us to exploit adequately the capabilities that may be generated in the R&D program.

Joseph V. Charyk
Under Secretary

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