~~TOP SECRET~~

BYEMAN
CONTROL SYSTEM

June 13, 1969

MEMORANDUM FOR THE RECORD

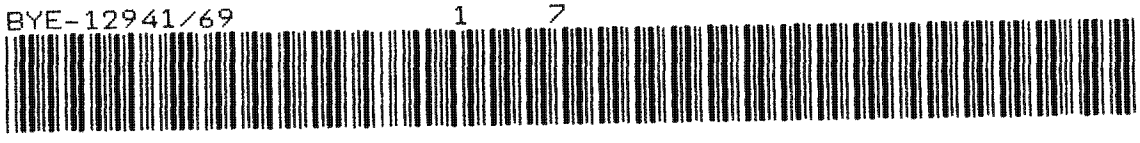
SUBJECT: List of Topics for Discussion with ExCom

The following topics are suggested for possible discussion at the June 20 meeting of the Executive Committee:

1. Use of Drones for Peripheral SIGINT in Place of Manned Aircraft

The recent shoot-down of the EC-121 off North Korea highlighted our dependence upon manned aircraft for collecting COMINT and SIGINT from peripheral stations. Peripheral airborne reconnaissance operations are a necessary adjunct to overhead collection. They stimulate the defense system causing reactions which can be collected in the airborne platform, or desirably, can be used in a cooperative manner with overhead collectors to obtain more information than possible from either one alone. Peripheral missions can collect SIGINT over a longer duration than satellite collectors.

As you know, we decided a month ago to equip twenty 147T high altitude drones with ELINT equipment. The data will be received on the ground via a data link. The system is expected to be operational in five months. Unmanned aircraft were selected because the possible loss of a vehicle by shoot-down or operational attrition would be less inflammatory, and because drones are relatively cheap to operate considering all costs including supporting costs for manned aircraft. For these same reasons, the JCS now prefers drones to manned aircraft for peripheral reconnaissance. The "requirement" is still being processed through DDR&E with assistance of JCS and NSA.



IDEALIST/HEXAGON/DORIAN/CORONA/GAMBIT/EARPOP/[redacted]

BYEMAN/COMINT
CONTROL SYSTEM

~~TOP SECRET~~
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PAGE 1 OF 6 PAGES

3. Manned Aircraft Reconnaissance

Based on FY 1971 budget estimate recommendations from the NRO Program Directors, it is apparent that the NRP FY 1971 total budget will significantly exceed the FY 1970 budget. Accordingly, it is desirable to initiate critical reviews shortly of several on-going programs from a "value received" standpoint. One such area is U-2 aircraft support, which has been submitted at a $52.1 million cost to the NRP, with added costs to the Air Force and CIA of about $10 million. In contrast to rising costs of this program, the total operational hours for U-2's is forecast to reduce in FY 1971 by 26.5% from FY 1969. The DNRO proposes that a study be initiated of the U-2 program, costs, and relationships of drones and other manned aircraft (such as the SR-71) to mission requirements, in preparation for the ExCom review of the FY 1971 budget.

4. Termination of MOL and Initiation of HEXADOR

The decision to terminate MOL and build an unmanned vehicle makes it necessary to add a new item to the NRP. This vehicle, tentatively called HEXADOR, would carry the high resolution camera in a new spacecraft. If the spacecraft is the same as the HEXAGON, we might call it HEXADOR; however, we must look at other possible vehicles. The new program obviously impacts the NRP. We will have to make difficult program decisions. In short we will be facing a major change in overhead photographic collection—from the present CORONA-GAMBIT, to a more complex mixture of HEXAGON-GAMBIT-HEXADOR.

5. HEXAGON Overrun and Slip

The HEXAGON program has suffered a slip and an overrun, which may have serious implications. If further slippage occurs, or if there are difficulties in the first flights of the vehicle, there may be an undesirable gap in the intelligence collection. To provide for this gap, we may have to order three or four more CORONAs. The overrun, now estimated to be $60 million in 1970 and another $60 million in 1971, is particularly difficult to handle in these tight budget years. The overrun is caused by increases in the payload, the Stellar Index camera, and the spacecraft. While some reductions are possible immediately, we cannot predict whether new overruns will occur.

In order to obtain the best possible evaluation of the cost and schedule of HEXAGON, I have appointed a committee headed by Dr. Robert Naka to conduct a technical review of the program. I will have a summary of their findings by the date of the meeting. (Dr. Naka will become my deputy on July 1.)

It is difficult to establish the need for the SI camera. The Army has a requirement for large scale mapping. If the requirement is to be met, satellite photography is probably the best collector. The difficulty in establishing the desirability of the camera in relation to its cost lies in determining what would be lost if we did not have the large scale maps, how we make do without these maps, and what the total cost is. There is now a requirement for developing and procuring new cartographic equipment. There will also be a need for more personnel despite the claims of more efficient map production. The DIA should be asked to examine the requirement critically. I will talk to General Joe Carroll about this.

6. Readout

In response to the Deputy Secretary of Defense's direction, a team has been set up under Mr. Bennington, ODDR&E, to review the needs for [redacted] surveillance and the alternate methods of obtaining such a satellite capability. Pending the completion of this review, I have structured our initial approvals of FY 70 funding of technology to emphasize sensor development which remains the least well developed component of proposed systems. We are increasing our support of the CIA technology program based on solid state sensors to several times the level identified in the President's budget and reducing some other technology items accordingly. These initial approvals will permit increased progress in the critical areas of technology, pending a possible decision to augment the efforts even more.

7. High Resolution Radar in Space

In 1964, experiments with a high resolution radar in space were conducted. The experiment was successful. Better than 100' resolution was obtained, over a swath width of ten miles. NPIC evaluated the imagery, stated it was capable of providing useful intelligence, and recommended further research and development.

[redacted]

Technology developments have been identified which are applicable to all of these possible uses. The Navy is funding development of a high powered transmitter; the NRP will support about a $500,000 effort in other components. DDR&E is examining the validity of the potential uses, and their report will help determine the need for additional effort.

8. Anti-Satellite Capability

One of the questions repeatedly discussed is the possibility of the shoot-down of one of our satellite reconnaissance vehicles by the Soviets. We are considering various countermeasures in the form of [redacted] In some instances these measures seem to be inadequate.

I believe that one counter to the possible Soviet threat is to possess a satellite shoot-down capability of our own. The Soviets will be deterred if they feel that we are able to destroy one of their satellite vehicles in retaliation for any hostile action by them.

[redacted]

9. Operational Control of Overflight of Denied Territory by Reconnaissance Aircraft

It is the national policy for the DNRO to maintain management control of all vehicles which overfly denied territory. The actual flights of these aircraft are supervised and conducted either by the CIA (under the auspices of the NRO) or by the Joint Chiefs of Staff. Permission for these flights is requested by the DNRO from the 303 Committee.

The Joint Chiefs of Staff adhere to this policy but believe it should be changed. They feel they should have the authority to request permission for manned or unmanned drone aircraft reconnaissance sorties directly to the 303 Committee. According to their view, the DNRO should be concerned only with satellites. The Executive Committee may wish to examine this question and perhaps issue new guidance or recommend changes in procedure.

Recently, the Chairman, JCS, transmitted a memorandum to Mr. Packard recommending a 303 Committee review involving a different but related problem. This involves the coordination procedures for NRO (CIA operated) flights in areas of responsibility of the unified and specified commands.

10. Comparison of Capabilities and Costs of Various Ways of Conducting Crisis Reconnaissance

Providing the capability to conduct reconnaissance in crisis situations has been discussed for a number of years, although no firm requirement has been stated. At the present time there are several proposed arrangements which appear worthy of further investigation. These include: satellite vehicles having solid state array sensors with [redacted], satellite vehicles having film recording with laser beam readout, [redacted]

I have initiated a study of the capabilities of each of the systems which will provide the advantages and disadvantages of the various systems and attached cost estimates to each of them.

John L. McLucas

BYE-12944-69, 13 June 1969.
Memo for Helms and DuBridge
Subject: List of Subjects for Discussion w/ExCom
Attachments: BYE-12942-69 and BYE-12941-69.

Copy 1 Mr. Helms
2 Dr. DuBridge
3 [redacted]

BYE-12943-69, 13 June 1969
Memo for DepSecDef
Subject: List of Subjects for Discussion w/ExCom
Attachments: BYE-12942-69 and BYE-12941-69.

Copy 1 DepSecDef
2 Dr. Foster
3 [redacted]

BYE-12943-69, 13 June 1969.
Memo for DepSecDef
Subject: List of Subjects for Discussion w/ExCom
Attachments: BYE-12944-69
BYE-12942-69 (Agenda)
BYE-12941-69 (M/R: List of Topics for Discussion with ExCom)

Copy 4 [redacted]
5 Col. Allen, SS-1 (STAR)

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Col. Yost " "
Mr. Reber - complete version
Dr. McLucas - complete version