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 NATIONAL SECURITY AGENCY
 FORT GEORGE G. MEADE, MARYLAND

Serial: N 0920

15 MAR 1961

PL 86-36/50 USC 3605
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MEMORANDUM FOR THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING

SUBJECT: Space Surveillance Development Planning (U)

- REFERENCES:
- (a) Development Plan for the NORAD Space Detection and Tracking System (draft) 496L SPO (S), dated 16 January 1961.
 - (b) United States COMINT/ELINT Requirements Study for Collection of Foreign Earth Satellite and Space Vehicle Transmissions, NSA (TSC), dated December 1960.
 - (c) Message from NORAD to DIRNSA (TSC), DTG 142130Z February.

1. At the verbal request of the Director of Defense Research and Engineering, the National Security Agency has reviewed reference (a). It is noted that the proposed NORAD development plan provides for detection and tracking of [redacted] While certain first priority national intelligence objectives can be satisfied through active radar and optic tracking, the identification and purpose of the vehicle is unlikely to derive from these sources. The National Security Agency proposes that a COMINT/ELINT capability can best satisfy the first priority requirements for information concerning [redacted]

2. To be effective, the Space Detection and Tracking System, (SPADATS) under NORAD will require information on an immediate basis which contributes to a determination of the nature and purpose of each vehicle. In most cases, this information will derive from successful intercept and analysis of communications and electronics transmissions. Thus, the NORAD plan (reference a) and the NSA plan (reference b) are compatible and mutually supporting. A truly effective United States space surveillance system therefore requires implementation of both the space detection and tracking system and the SIGINT collection and analysis systems. The North American Air Defense Command has concurred in and evidenced strong support for the NSA plan for an improved SIGINT collection system (reference c).

3. The North American Air Defense Command has scheduled Phase I of the Space detection and tracking system to be operational by 1 January 1964. In order to provide for an effective National capability by that date, the National Security Agency has scheduled its minimum capability SIGINT

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Serial: N 0920

collection and analysis system (Phase I) to become operational by 1 January 1964. Because of the decreased lead time available for acquiring the necessary National SIGINT intelligence capability, it is necessary that supplemental funds be made available for FY-62. NSA has not budgeted funds for this purpose in FY-62 and the earliest that this program could appear in an NSA budget is FY-63. A summary of the time phasing and Budget Estimates covering this program is attached. The National Security Agency will prepare a detailed funding and development plan which will be forwarded in approximately 30-60 days. It is proposed that upon completion this plan be included as Part II of a Department of Defense Development Plan for Space Surveillance.



L. H. FROST
Vice Admiral, USN
Director

Incl:
a/s (dup)

Copy Furnished:
General G. B. Erskine, USMC-Ret,
Asst. to SecDef, Sp Opns

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M/R: This memorandum provides comments to DDR&E on the proposed NORAD Space Detection and Tracking System development plan. Since the NORAD plan does not include a COMINT/ELINT collection capability, NSA proposes that our space collection plan (Reference b) be added to the NORAD development plan to make a complete space surveillance plan. It should be noted that the attached cost estimates include R/D and T/E costs (including installation and checkout) but do not include O/M site support costs. A detailed development and funding plan must be prepared by NSA and the three cryptologic services within the next 30-60 days to cover all phases of this program including O/M support costs and manning. Preliminary analysis of typical operating costs at an average satellite site projected to the period of 1 January 1964 indicates a manpower and operating requirement of approximately 125 personnel both civilian and military which together with necessary supplies should require direct O/M support to the extent of two million dollars per year. It should be recognized that lower requirements could be expected for the probe sites.

Concurred in by PROD (RADM Kurtz), R/D (Dr. Kullback), PROD-04 (Mr. Kirby), COSA (Mr. Conley), GENS (Col. Minick) and ANEQ (Mr. Moulton), COMP (Col. Rogers).


 RONALD G. SCHMIDT, COSA-206, 3782, 7 March 61,
 bjb

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SPACE COLLECTION BUDGET ESTIMATES

PHASE I - OPERATIONAL DATE - 1 JANUARY 1964

<u>FISCAL YEAR</u>	<u>ESV SYSTEM</u>	<u>DEEP SPACE SYSTEM</u>	<u>R/D & T/E</u>	<u>TOTAL</u>
1961	Buy BANKHEAD - 1 & 2		-- *	-- *
1962	Install BANKHEAD - 1 & 2 Design BANKHEAD - 3 Buy BANKHEAD -3	Design SPADISH - 1 Buy SPADISH - 1	-- * 2.17 M 6.0 M 5.7 M	13.87M
1963	Install BANKHEAD - 3 Buy BANKHEAD - 4 & 5 Upgrade BANKHEAD - 1 & 2 General Development	Install SPADISH - 1 Buy SPADISH - 2 & 3	1.0 M 12.0 M 4.0 M .2 M 1.0 M 11.4 M	29.6 M
1964	Install BANKHEAD - 4 & 5	Install SPADISH - 2 & 3	2.0 M 2.0 M	4.0 M
	TOTAL SPACOL - 1			47.47M
PHASE II - 1964 - 1970 TIME PERIOD				
1963	Develop capabilities for satellite surveillance system to handle multiple targets		5.0 M	5.0 M
1964	Continue to develop capabilities for satellite surveillance systems to handle multiple targets		3.0 M	3.0 M
1965	Supplement five BANKHEAD satellite surveillance systems with multiple target configurations		19.0 M	19.0 M
	TOTAL SPACOL - 2			27.0 M

* FY-61 and FY-62 Funds for Modification, Installation and Operation of the ARPA furnished equipment have been provided by ASA, ~~SECRET~~ AFSS and AF.

M - Indicates Millions of Dollars

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