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PRO A66 7

16 September 1971

NOTE FOR [redacted], SAFFMB

The attached Memo for Record is forwarded for your information. The current effort with regard to near term CORONA/HEXAGON considerations should result in a much more realistic basis for Block II planning. The question arises as to whether we want the Agency to continue as advertised or since the matter is not time urgent (Block II should not be a November ExCom issue), we should tell the Agency to proceed more deliberately, in closer concert with SAFSP and with more realistic regard to procurement/launch projections.

ROBERT A. SCHOW, JR.
Major, CE, USA

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Memo/Record, 15 Sep

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HANDLE VIA BYEMAN CONTROL SYSTEM

~~(S)~~ NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

THE NRO STAFF

15 September 1971

MEMORANDUM FOR RECORD

SUBJECT: HEXAGON Block II

A meeting was held 30 August 1971 in [redacted]'s office for the primary purpose of reviewing certain funding adjustments in the Agency HEXAGON program. In the course of the discussion, Mr. Haas, who has recently replaced Mr. Patterson as the Sensor Subsystem Project Chief, made a brief presentation with regard to the approach which will be taken in accomplishing competitive Block II conceptual studies. Funding in the amount of $1M for such studies was approved by a memorandum from [redacted] on 24 June.

Mr. Haas indicated that he plans to invite four contractors to competitively develop their concepts for a Block II sensor subsystem in accordance with two general options. He plans to be under contract by the end of September with a period of performance of four months.

The general options to be addressed by each contractor were described as follows:

Option A - Under this option the current camera performance characteristics and the basic optical bar design would be retained, but the mission life would be increased to 75-90 days. Contractors would be free to propose simplified and/or otherwise improved concepts for the film path and camera electronics to achieve increased reliability and reduced cost. The longer mission life is aimed at more optimum imagery collection and return from the three/year launch rate already planned for FY 75 and subsequent years.

Option B - This option would address much longer mission lifetimes of 145-180 days with the specific objective of reducing the HEXAGON launch rate to two/year. Appropriate increases to the film load and the number of RV's are to be considered. Contractors would be free to propose applicable simplifications to the existing camera design, such as reductions in the maximum scan width and variscan capability

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permitted by the increased number of target area accesses. Submission of a totally new camera design as a suboption would also be allowed.

Although Mr. Haas indicated at the time of the above meeting that his plans had not been reviewed by Mr. Brownman, he has subsequently indicated that he has been given approval to proceed. He has further advised that he plans to discuss his Block II effort with Colonel Krumpe on 16 September in Danbury in order to give SAFSP a basis for appropriate parallel studies.

Because of the four-month period specified, the results of the Block II concept studies will not be available to support a HEXAGON Block II issue for the November ExCom. Mr. Haas stated, however, that he is still looking at Block II implementation on System #19 (operational in early FY 77). Previous communications with CIA have projected a substantial FY 73 funding requirement ($33M) to achieve this Block II schedule. Mr. Haas agreed that a mid-October review of the matter should be made. It would appear that any serious consideration of HEXAGON Block II will be impractical at the November ExCom due to the probable lack of substantive information from CIA and SAFSP. This would further imply that significant Block II FY 73 funding and the objective of System #19 implementation should be deferred.

The CIA plans are responsive to past DNRO desires to investigate the introduction of competition into sensor subsystem procurement and the achievement of lower recurring costs. Some of the more ambitious ideas which have received recent informal mention (for example, a film readout HEXAGON compatible with projected EOI imagery transmission and receiving facilities) have, at least for the moment, been dropped from consideration. The current effort should eventually produce a reasonable spectrum of alternatives upon which to base HEXAGON program issues.

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16 September 1971

NOTE FOR MR. MURPHY, SS-4
LT COL SCIOTTO, SS-4

The attached Memo for Record concerning current Agency HEXAGON Block II plans is forwarded for your information and any comment you may care to offer on the suitability of the proposed configurations with regard to mission scheduling, operation, and collection capability.

Our current efforts with regard to near term HEXAGON launch schedules will probably show that from a practical standpoint, the implementation of a Block II is somewhat further off than envisioned by the Agency.

ROBERT A. SCHOW, JR.
Major, CE, USA

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Memo/Record, 15 Sep

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27 September 1971

NOTE FOR MAJOR SCHOW

SUBJECT: HEXAGON Block II

The following comments are in reference to your memorandum concerning HEXAGON Block II plans. Prior to implementation of hardware changes which may be contemplated for future HEXAGON vehicles certain investigative studies should be undertaken. Some of these study areas are:

a. Operational philosophy

b. Requirements satisfaction gains vs. cost

c. Photo satellite mix

Some comments on the above in relation to the options being studied for Block II. Changes to the existing HEXAGON configuration should logically follow from operational experience. Our present experience with the one flight of HEXAGON is too early in system activation to definitively determine and fund changes. An operational reason should dictate configuration changes. We do not feel we have enough operational experience at this time to justify changes.

An operational philosophy which has HEXAGON life at 75-90 or 145-180 days must be oriented to what is the feasible intelligence value of photos which are taken beyond a certain time in the past (RV's vs. orbit life).

System changes should result from studies which are developed from requirements satisfaction gains or improvements rather than from what is technically feasible as a stand-alone reason. The requirements satisfaction gains associated with increased life needs quantified prior to performance vs. cost analysis.

The above has to be considered in the context of photo systems mix. The time period being considered involves the H, G, and EOI mix. Theoretically a two satellite EOI system should provide crisis areas or high interest area coverage whether a HEXAGON is on orbit or not thereby deleting the need for a HEXAGON-GAMBIT mix always on orbit. This point is made to highlight the need for some definitive investigations prior to hardware development. Hardware changes should not be

funded for the sake of hardware change or in a vacuum.

Sam R. Sciotto Jr

SAM R. SCIOTTO, Jr.
LtCol, USAF