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WASHINGTON, D.C.

THE NRO STAFF

3 September 1971

MEMORANDUM FOR MR. BROWMAN, CIA/OSP

SUBJECT: Alternative EOI Configurations Study

REFERENCES: a. WHIG 0870, 1 July 71, Subj: Study Request  
b. OSP memo, 13 July 71, Subj: Alternative  
EOI Configurations, BYE-109638-71

Reference a requested you examine possibilities of extending EOI capability in such directions as improved nighttime imaging and increased area coverage with emphasis on more effective replacement of GAMBIT and/or HEXAGON. A response was requested for October 71 to allow adequate time for a comprehensive study that would permit review at the November ExCom meeting. Your early response (reference b) in July covered many of the study area points and was subsequently forwarded by the Deputy DNRO to the ExCom principals to provide some insight into certain design trades and technical problems associated with EOI alternative configurations.

Dr. Martin (OS&T) recently responded to the OSP study with some questions which are quoted as follows:

a. "Regarding EOI growth (paragraph 4), I wonder if image intensifiers and/or two-dimensional, charge-coupled sensor arrays might be used to increase data rate; no doubt a new type of on-board storage would be required."

b. "Relative to [redacted] (paragraph 6), it is mentioned EOI could detect [redacted] Am I correct in assuming this means not that the system searches, but that if it is properly pointed it will, with sufficient integration time, receive an impression. In this connection, is there any hope for [redacted] capability?"

GAMBIT HEXAGON  
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c. "Finally, I wonder whether I misread or if there is a conflict regarding new sensor technology availability: paragraph 8 says that there is no expectation of better detectors within the next two to three years and paragraph 10c says sensor technology programs have no likelihood of coming to fruition until 3-5 years. If it is an inconsistency, what is the correct estimate thought to be?"

Your review and answers to these questions would be appreciated at the earliest possible date.

*David D. Bradburn*  
David D. Bradburn  
Colonel, USAF  
Director

cc: Dr. Martin  
Harry Davis

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