

~~TOP SECRET~~HANDLE VIA
BYEMAN
CONTROL SYSTEM~~(S)~~ NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.



THE NRO STAFF

March 6, 1975

MEMORANDUM FOR LT COLONEL HUTCHISON, SS-7

SUBJECT: SS-6 Comments on Planning for Block IV HEXAGON Message

SP should be given the opportunity to optimally design a system within cost constraints as identified using the latest definition of the search problem. The Chairman/ICRS says community is moving towards community adoption of the 3 x 3 cell and 8-periodicities some time next year. ICRS recognizes that current system software is based on 12 x 18 WAG cells and that for use by HEXAGON and KENNEN, a 3 x 3 transform will have to be made.

It is highly probable that the software will have to be changed. Further, with the advent of the multi-purpose simulator in 1976, the mission planning and operational software for a 1980 HEXAGON does not appear to be an East Coast or OD&E function.

See the attached recommended changes:

★ "C. Requirements. For some time COMIREX has been accounting at the 3NM x 3NM cell level. COMIREX is in the process of grouping these cells into 8 periodicities. Preliminary data is available and will be provided for your study."

"D. Software. Hardware changes which affect mission planning and operational software should be identified. Necessary changes to the software should be identified and costed."

James R. Blankenship
JAMES R. BLANKENSHIP
Colonel, USAF

KENNEN/HEXAGON

HANDLE VIA
BYEMAN
CONTROL SYSTEMCLASSIFIED BY BYEMAN - 1 EXEMPT FROM
GENERAL DECLASSIFICATION SCHEDULE OF
EXECUTIVE ORDER 11652 EXEMPTION CATE-
GORY 582 DECLASSIFY ON IMP DET.~~TOP SECRET~~WORKING PAPERS
CONTROL NO. INTERNAL
COPY OF COPIES
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SOCOMM MESSAGEFORM			
SECURITY CLASSIFICATION SECRET			
TYPE MSG	BOOK	MULTI	SINGLE
PRECEDENCE ACTION ROUTINE PRIORITY			
INFO			
FROM: WHIG		RECD. SAFSS 1975 FEB 28 PM 4:03 ³⁶⁸ KKK	
TO: CHARGE <i>catr 195</i>		SPECIAL INSTRUCTIONS HANDLE VIA BYEMAN CONTROL SYSTEM	
SECRET CITE <u>0331</u>		DISTRIBUTION:	
HANDLE VIA BYEMAN CONTROL SYSTEM		DNRO	
HEXAGON		RD-2	
FOR MAJ/GEN BRADBURN FROM COL ^{ROSENBERG} WHEELER /		SS-1 X	
SUBJECT: PLANNING FOR <u>HEXAGON BLOCK IV</u>		SS-2 EXEC	
1. IN ACCORDANCE WITH DISCUSSIONS BETWEEN MR. PLUMMER AND YOURSELF ON 24 FEB, REQUEST YOU INITIATE A PLANNING STUDY FOR THE HEXAGON BLOCK IV. ALTHOUGH AN EXCOM DECISION FOR GO-AHEAD OF BLOCK IV IS NOT EXPECTED BEFORE JULY 1977, THE PLANNING AND PREPARATION FOR THAT DECISION SHOULD PROCEED NOW TO INSURE THAT EARLY PRELIMINARY DECISIONS ARE MADE ON TIME AND THAT NECESSARY DATA IS AVAILABLE WHEN NEEDED.		SS-2 ADMIN X	
2. TECHNICAL CAPABILITIES, SCHEDULE VARIATIONS AND ASSOCIATED COSTS SHOULD BE ESTIMATED SEPARATELY FROM THE FISCAL GUIDANCE TO MAINTAIN LOW VISIBILITY ON THE ACTIVITY. ITEMS FOR BLOCK IV CONSIDERATION SHOULD		SS-3	
		SS-4	
		SS-5	
		SS-6	
		SS-7 X	
		SS-8	
		COMP X	
		COMM	
		RD-2 RF	
		RF X	
		FILE 7	
DATE 25		TIME	
MONTH FEB		YEAR 75	
PAGE NO. 1		NO. OF PAGES 23	
DRAFTER	TYPED NAME AND TITLE LT COL HUTCHISON <i>Mr. Murphy</i>	PHONE	SIGNATURE <i>Rosenberg</i>
RELEASER	TYPED (or stamped) NAME AND TITLE <i>Donalson</i>		
SECURITY CLASSIFICATION SECRET		REGRAING INSTRUCTIONS	

SOCOMM Form 173

1 Aug 71

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~~SECRET~~

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INFO				

INCLUDE DESIRABILITY AND IMPACT OF CONTRACT COMPETITION ☐
 FOR SEGMENTS OF THE HEXAGON SYSTEM WHERE SIGNIFICANT
 COST REDUCTION IS POSSIBLE THROUGH SIMPLIFICATION.
 CHANGES TO CURRENT CAPABILITY, INCLUDED REDUCED COMPLEXITY,
 SHOULD BE INCLUDED, RECOGNIZING THAT THE GOAL OF THIS
 EXERCISE IS TO DETERMINE THE FEASIBILITY OF SIGNIFICANT
 REDUCTIONS IN PROJECTED PROGRAM COSTS. THE WHIG STAFF
 WILL PROVIDE A LIST OF REVISIONS TO THE CURRENT ^{CAPABILITY} REQUIREMENTS
 BY 6 MARCH 1975. YOUR SUGGESTIONS IN THIS AREA ARE
 SOLICITED; THE WHIG/WAHOO STAFF WILL BE RESPONSIVE TO YOUR
 SUGGESTIONS FOR REQUIREMENTS REVISIONS THROUGHOUT THE
 STUDY. IN ORDER TO ASSESS THE LONG TERM COST TRADE-OFF
 IMPLEMENTATIONS, COST ESTIMATES SHOULD COVER A TEN-YEAR
 PERIOD COVERING ANY POSSIBLE DEVELOPMENT, PRODUCTION AND
 OPERATION OF BLOCK IV.

3. REQUEST YOU PROVIDE A PRELIMINARY PLAN BY EARLY APRIL
 TO PERMIT CONSIDERATION OF DECISION MILESTONE CHANGES AND
 POTENTIAL BUDGET ADJUSTMENTS BEGINNING IN FY-76 OR FY-77.
 A COMPLETED PROGRAM PLAN AND RECOMMENDATIONS SHOULD BE
 SUBMITTED BY LATE MAY OR EARLY JUNE. AT THE PRESENT
 TIME THIS PLANNING DATA IS BEING DEVELOPED FOR THE DNRO'S

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INCLUDE DESIRABILITY AND IMPACT OF CONTRACT COMPETITION
 FOR ALL OR MAJOR SEGMENTS OF THE HEXAGON SYSTEM ⁷ CHANGES
 TO CURRENT CAPABILITY, INCLUDING REDUCED COMPLEXITY, ~~MAY~~
~~INCLUDE A METRIC M&C CAPABILITY, ABILITY TO OPERATE IN~~
~~MONO OR STEREO, INCREASED LIFE TIME UP TO ONE YEAR ON-~~
~~ORBIT (EXAMINE LIFE VS COST TRADES), AND OTHER DESIGN~~
~~IMPROVEMENTS AS APPROPRIATE RECOGNIZING THAT THE GOAL OF~~
 THIS EXERCISE IS TO DETERMINE THE FEASIBILITY OF SIGNI-
 FICANT REDUCTIONS IN PROJECTED PROGRAM COSTS. IN ORDER
 TO ASSESS THE LONG TERM COST TRADE-OFF IMPLEMENTATIONS, COST
 ESTIMATES SHOULD COVER A TEN-YEAR PERIOD (L.E. ^{covering any possible development} ~~FY 76-85~~). ^{production & operation}
 3. REQUEST YOU PROVIDE A PRELIMINARY PLAN BY EARLY APRIL
 TO PERMIT CONSIDERATION OF DECISION MILESTONE CHANGES
 AND POTENTIAL BUDGET ADJUSTMENTS BEGINNING IN FY 76 OR
 FY 77. A COMPLETED PROGRAM PLAN AND RECOMMENDATIONS
 SHOULD BE SUBMITTED BY LATE MAY OR EARLY JUNE. AT THE
 PRESENT TIME THIS PLANNING DATA IS BEING DEVELOPED FOR
 THE DNRO'S CONSIDERATION. THEREFORE, ACTIVITIES AND
 CONFIGURATIONS RELATED TO THIS EFFORT SHOULD NOT BE
 PRESENTED OR DISCUSSED IN ANY OF THE CURRENT INTEL-
 LIGENCE COMMUNITY STUDIES. E-2 IMPDET

*WHERE SIGNIFICANT
 COST REDUCTIONS
 IS POSSIBLE THROUGH
 SIMPLIFICATION.*

*I think we have
 done a study of the
 requirements and have
 an approach to
 simplification.*

INSIDE

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CONSIDERATION ^{only} THEREFORE, ACTIVITIES AND CONFIGURATIONS
RELATED TO THIS EFFORT SHOULD NOT BE PRESENTED OR DISCUSSED
IN ANY OF THE CURRENT INTELLIGENCE COMMUNITY STUDIES.
E-2 IMPDET

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APPROXIMATELY 0.7. SCAN WIDTHS GREATER THAN 90 DEGREES \neg
ARE NOT REQUIRED. THERE IS A WEAK REQUIREMENT FOR A SCAN
CENTER CAPABILITY WHICH WILL ALLOW PHOTOGRAPHY AT MAXIMUM
SCAN ANGLES OF PLUS OR MINUS 60 DEGREES TO MAXIMIZE
ACCESSES IN CERTAIN CASES.

B. OPERATIONAL FLEXIBILITY.

(1) THE ABILITY TO VARY SCAN CENTER AND SCAN
WIDTH DURING AN OPERATION SHOULD BE COSTED AS AN OPTION.

(2) THE ABILITY TO CHANGE MODE (STEREO OR MONO)
DURING AN OPERATION SHOULD BE COSTED AS AN OPTION.

(3) THE ABILITY TO CHANGE MODE (STEREO OR MONO)
BETWEEN NESTED OPERATIONS SHOULD BE INCLUDED UNLESS THERE
IS A SIGNIFICANT COST IMPACT, REQUIRING IT TO BE COSTED
AS AN OPTION.

add. new C & D

C. SOFTWARE. SOFTWARE CHANGES TO THE MISSION
PLANNING (EAST COAST) SOFTWARE SHOULD BE IDENTIFIED.
CHANGES TO THE OPERATIONAL (WEST COAST) SOFTWARE SHOULD
BE COSTED.

E. FILM SUPPLY AND FILM MANAGEMENT - CHANGES IN
LINE WITH CURRENT EVOLUTIONARY EFFORTS TO MAXIMIZE
FILM AVAILABLE FOR EXPOSURE AGAINST REQUIREMENTS SHOULD
BE INCLUDED. \neg

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<p>E. ORBIT LIFE - ORBIT LIFE SHOULD BE A MINIMUM OF 180 DAYS, AT ORBIT ALTITUDES COMMENSURATE WITH IMAGE QUALITY REQUIREMENTS.</p> <p>F. MAPPING - THE MAPPING CAMERA SYSTEM SHOULD BE OMITTED. A METRIC PAN SYSTEM AS DEFINED BY THE METRIC PAN STUDY SHOULD BE INCLUDED AS A SEPARATE OPTION.</p> <p>E-2 IMPDET.</p>					
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