

PP 000000
 DE RUMQBA 541 132255Z
 ZNY XXXXX KKK ZIM
 P 132255Z
 BT
 XXXXX
 GUARD 736
 GUARD PASS WHIG



Pulse

~~TOP SECRET~~ 132255Z MAY 74 CITE CHARGE 3934.

PRIORITY WHIG,
 SECTION ONE OF TWO
 HEXAGON

FOR [REDACTED] FROM COLONEL BRICKER

SUBJ: HEXAGON BUDGET SUBMISSION

REF: SVT-16535-74 AND WHIG 0616 13 MAY 74

IN RESPONSE TO YOUR REQUEST, THE FOLLOWING INFORMATION IS PROVIDED CONCERNING THE HEXAGON PROGRAM:

A. THE STELLAR TERRAIN CAMERA PROGRAM FOR UNITS AFTER NO. 12 (HEXAGON NO. 16):

(1) OPTION 2, TWO SYSTEMS PER THREE LAUNCHES: THE COST OF THIS OPTION SHOULD BE CORRECTED AS SHOWN BELOW. THESE COSTS WILL PROVIDE FOR PROCUREMENT AND OPERATION SCHEDULE AS SHOWN IN REFERENCED DOCUMENT UNDER THIS OPTION (FY 75 ALL DEFINED)

PAGE 2 CHARGE 3934 ~~TOP SECRET~~

	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
ST CAMERA	2,900	6,800	7,200	5,900	11,650	11,600
ST RV	0	.800	1,400	1,400	1,800	2,400
DOPPLER	0	.630	0	0	0	.700
TOTALS	2,900	8,230	8,600	7,300	13,450	14,700

(2) THE FOLLOWING COSTS PERTAIN TO A NEW OPTION 3 FOR THE ST SYSTEM INVOLVING A RATE OF ONE SYSTEM PER TWO LAUNCHES BUT WITH TWO HEXAGONS (NO. 17 & NO. 18) NOT EQUIPPED WITH THE ST SYSTEM AT THE CONCLUSION OF THE CURRENT APPROVED ST PROGRAM, FY 1975 COSTS ARE ZERO.

	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
ST CAMERA	6,350	6,520	4,800	5,600	11,200
ST RV	.500	1,300	1,400	1,400	1,640
DOPPLER	0	.660	0	0	0
TOTALS	6,850	8,880	6,200	7,000	12,840

(3) SHOULD IT BE DESIRED TO ADJUST OPTION 2 TO A POSITION WHERE NO FY 1975 COSTS WOULD BE INCURRED, IT WOULD REQUIRE ACCEPTANCE OF A TWO VEHICLE LAPSE, AS IN OPTION 3 SHOWN IN PARA A(2) ABOVE, AND WOULD ALSO REQUIRE INCORPORATION OF A NEW FUNDING PROFILE FOR THE ST CAMERA LINE IN OPTION 2 AS FOLLOWS:

DISTRIBUTION		
SATIS	A	I
SARIS		
ED		
ES-1		
ES-2		✓
ES-3		
ES-4		
ES-5		
ES-6		
ES-7		
ES-8		
ES-9		
ES-10		
ES-11		
ES-12		
ES-13		
ES-14		
ES-15		
ES-16		
ES-17		
ES-18		
ES-19		
ES-20		

~~TOP SECRET~~ WORKING COPY

~~TOP SECRET~~
~~SECRET~~
 HANDLED VIA ~~SECRET~~
 CONTROL SYSTEM

GE 3 CHARGE 3934 ~~TOP SECRET~~

	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
ST CAMERA	8,600	8,300	6,100	11,200	11,600
ST RV	.800	1,400	1,400	1,800	2,400
DOPPLER	.630	0	0	0	.700
TOTALS	10,030	9,700	7,500	13,700	14,700

B. UNIT COST FOR STELLAR TERRAIN SYSTEMS AFTER NQ 12:

(1) OPTION 1:

ST CAMERA	5,560
ST RV	.810
DOPPLER	.105
TOTAL PER UNIT	6,475

(2) OPTION 2:

ST CAMERA	6,990
ST RV	.800
DOPPLER	.130
TOTAL PER UNIT	8,020

(3) OPTION 3:

ST CAMERA	8,560
ST RV	1,060
DOPPLER	.165
TOTAL PER UNIT	9,685

PAGE 4 CHARGE 3954 ~~TOP SECRET~~

C. HARDWARE OPTIONS FOR IMPROVEMENTS TO THE ST CAMERA SYSTEMS
 #13 AND SUBSEQUENT: THE FOLLOWING INFORMATION SHOWS AN ESTIMATE
 OF THE 3600/3020 STRUCTURE OF THESE COSTS, AS WELL AS THE MAXIMUM
 ACCEPTABLE DELAY IN GENERAL SYSTEMS IMPROVEMENTS UNDER THE THREE
 SCHEDULE OPTIONS.

	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
--	---------	---------	---------	---------	---------	---------

(1) ULTRA THIN

BASE FILM

ST CAMERA -	.300	.500	.800	0	0	0
-------------	------	------	------	---	---	---

(2) INCREASED

FILM CAPACITY

ST CAMERA -

3020 BLACK	.900	.900	.100	0	0	0
------------	------	------	------	---	---	---

(3) GEN SYS IMPROVEMENT (RELIABILITY/FLEXIBILITY). THESE
 IMPROVEMENTS REQUIRE GO AHEAD IN THE MONTH INDICATED

OPT 1 (DEC 74)

ST CAMERA -

3600 BLACK	1,000	.500	0	0	0	0
------------	-------	------	---	---	---	---

ST CAMERA -

3020 BLACK	2,000	5,200	2,800	0	0	0
------------	-------	-------	-------	---	---	---

TOTAL	3,000	5,700	2,800	0	0	0
-------	-------	-------	-------	---	---	---

P

AGE 5 CHARGE 3934 ~~TOP SECRET~~

OPT 2 (MAR 75)

ST CAMERA -						
3600 BLACK	.500	1.000	0	0	0	0
ST CAMERA -						
3020 BLACK	0	5.400	3.500	.500	0	0
TOTAL	.500	6.400	3.500	.500	0	0

OPT 3 (JUL 75)

ST CAMERA -						
3600 BLACK	0	1.500	0	0	0	0
ST CAMERA -						
3020 BLACK	0	3.500	5.000	.500	0	0
TOTAL	0	5.000	5.000	.500	0	0

D. USE OF THE IBM 370 COMPUTER IN LMSC BUILDING 756 BY HEXAGON

HOURS

HOURS AVAILABLE PER MONTH

347

(2 SHIFTS, 5 DAYS)

ALLOWANCE FOR MAINTENANCE &

ADMIN (10 PERCENT)

35

DEDICATION TO HEXAGON PE SENSOR

(NOT TIME SHARED)

40

PAGE 6 CHARGE 3934 ~~TOP SECRET~~

LMSC HEXAGON USAGE

(TIME SHARED)

70

TOTAL HEXAGON

145

AVAILABLE TO OTHER SYSTEMS

(TIME SHARED)

202

NOTE: CURRENT SOFTWARE PROGRAMS HAVE BEEN TAILORED TO THIS MACHINE. MEASURES WHICH REDUCE OR ELIMINATE ITS AVAILABILITY TO HEXAGON WILL RESULT IN SIGNIFICANT COSTS TO RECONSTRUCT THE COMPUTER PROGRAMS FOR USE WITH OTHER EQUIPMENT.

E. FILM COSTS. FILM COSTS FOR THE VARIOUS OPTIONS ARE DISCUSSED BELOW. IN ANY INDIVIDUAL SITUATION, THESE COSTS CAN VARY CONSIDERABLY DEPENDING ON THE PORTION OF THE LOAD DEVOTED TO COLOR, INFRARED AND/OR OTHER SPECIAL LOADS, AS WELL AS THE TIMING OF THE PROCESSING (HOLIDAYS, URGENCY, ETC.). HOWEVER, THE NOMINAL LOAD FOR THE BASELINE MAIN HEXAGON CAMERA WILL COST APPROXIMATELY \$.110M FULLY PROCESSED. THE USE OF UTR FILM WILL DOUBLE THIS COST BECAUSE OF THE COMBINED EFFECT OF INCREASED PRODUCTION COSTS PER FOOT AND INCREASED FOOTAGE. A 25 PER CENT INCREASE IN FILM CAPACITY WILL RESULT IN APPROXIMATELY 25 TO 30 PERCENT INCREASE IN THESE COSTS OR ABOUT \$.140M FOR THE NOMINAL LOAD AND \$.200M

E-2 IMPDET

~~TOP SECRET~~

BT

UNCLASSIFIED
CENTRAL SYSTEM

ZCZCXQ0254 04/24
PP RUXQAA
DE RUXQBA 942 1352256
ZNY XXXXX KKK ZNM
P 132255Z
BT
XXXXX
GUARD 737
GUARD PASS WHIG

Bought? Pallet cost?

~~TOP SECRET~~ 132255Z MAY 74 CITE CHARGE 3934.

PRIORITY WHIG.

FINAL SECTION OF TWO

HEXAGON

FOR [REDACTED] FROM COLONEL BRICKER

SUBJ: HEXAGON BUDGET SUBMISSION

FOR UTR, WITH RESPECT TO THE STELLAR TERRAIN CAMERA, THE FILM LOAD IS MUCH SMALLER, WITH A NOMINAL COST OF APPROXIMATELY \$.001M FOR THE BASELINE MATERIAL. RATIOS SUCH AS DISCUSSED FOR THE MAIN CAMERA APPLY TO THIS FIGURE ALSO.

F. PALLET AND GEODETIC PACKAGES

(1) PALLET: A SPECIFIC SCHEDULE OF PALLET RIDERS HAS NOT BEEN ESTABLISHED, HOWEVER, BASED ON PREVIOUS EXPERIENCE WITH STP AND OTHERS, WE BELIEVE THAT WE CAN PLAN ON FULL UTILIZATION

PAGE 2 CHARGE 3934 ~~TOP SECRET~~

OF THIS SYSTEM, THE COSTS SHOWN IN THE BUDGET ARE ONLY THOSE TO DESIGN THE SYSTEM, MODIFY THE HEXAGON VEHICLE TO ACCEPT THE PALLET AND CONSTRUCT THE PALLET HARDWARE. THE COSTS OF AUXILIARY PAYLOADS AND ANY PECULIARIZATION REQUIRED ARE NOT INCLUDED AND ARE TO BE PAID BY THE PAYLOAD SPONSORS. SP-6 IS NOW CONSIDERING VARIOUS PAYLOADS WHICH WOULD USE THIS SYSTEM, SHOULD IT BE DESIRED, AN ALLOCATION OF THE COST OF ESTABLISHING THIS CAPABILITY CAN BE CHARGED TO USERS AS THEY APPEAR.

(2) THE COSTS OF THE GEODETIC PACKAGE FOR BLOCK 3 (HEXAGONS 13, 14 AND 15) TOTAL \$1.570M, AS REFLECTED IN THE BUDGET SUBMISSION. THIS IS SOMEWHAT IN EXCESS OF THE \$1.000M DISCUSSED IN SNTS 0616, 13 MAY 74. THE \$1.570 WAS CALCULATED SO AS TO PROVIDE PROTECTION AGAINST UNFAVORABLE CONFIGURATION OF THE DMA PROVIDED EQUIPMENT AND/OR POSSIBLE DISAPPROVAL OF THE PALLET. DISAPPROVAL OF THE PALLET WILL RAISE THE ACTUAL COST OF INTEGRATION OF THE DMA EQUIPMENT BY APPROXIMATELY \$.400M.

G. 5TH RECOVERY VEHICLE OPTION: IF GO AHEAD ON THE FIFTH RECOVERY VEHICLE IS DELAYED UNTIL JUL 75, THE EFFECTIVITY OF THIS CHANCE WILL SLIP FROM 95% TO 85%.

PAGE 3 CHARGE 3934 ~~TOP SECRET~~

THE FOLLOWING FUNDING PROFILE REFLECTS SUCH A REVISION:

FY 1976 FY 1977 FY 1978 FY 1979 FY 1980

SPACECRAFT

3020	1.500	2.000	1.000	1.200	.600
3600	.300	0	0	0	0

RECOVERY VENS

3020	2.800	3.000	4.000	4.000	3.000
3600	.600	0	0	0	0

SENSOR

3020	.700	.600	.200	.200	.200
TOTAL	5.900	5.600	5.200	6.000	4.000

W. 25 PER CENT INCREASE IN FILM CAPACITY IF GO AHEAD ON THIS
OPTION IS DELAYED UNTIL JUL 75. THE OPTION WILL REMAIN EFFECTIVE WITH
VEN 19, BUT THE FOLLOWING FUNDING PROFILE WILL APPLY:

SPACECRAFT

3020	1.500	1.900	.500	.100	.100
3600	.300	0	0	0	0

RECOVERY VEN

3020	1.600	1.200	.500	.500	.500
------	-------	-------	------	------	------

SENSOR SUBSYS

3020	5.000	3.000	2.000	2.300	2.400
3600	.600	.700	0	0	0

TOTAL

TOTAL	9.000	6.800	3.000	2.900	3.000
-------	-------	-------	-------	-------	-------

E-2 IMPDET

~~TOP SECRET~~

BT

NNNN 160111