

BYE-059315-94

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NRL OUTGOING DOCUMENT



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I- Augmentation of Program "C" for Ocean Surveillance:

A-Ground Station Considerations

- 1- Second Generation Computer System which has outstanding attributes of (a) Speed, (b) I/O Flexibility so that the On-Site processing can continue the improvements in productivity and timely response thus far demonstrated in Ocean Surveillance.

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[] a Extractor (PDE) which not only selects certain data streams from the collection spacecraft but might even select certain specific pulse-widths from this data stream and even beyond this it might be possible to identify and isolate those pulse trains with certain specific High-Interest PRI characteristics so that the local processing system would then only have to identify by scan association, the data from one emitter into burst series before actual location computations could proceed.

The data from the PDE will be in the format (ATCON) required for local site processing, thus expediting this effort.

- III- Automatic Antenna Tracking System (AATS) will provide further improvement in the direction of data consistency across the collection horizon. In the past operator lapse of attention and cyclic adjustment could be seen in the data by voids in the data when they were inattentive. This automatic tracking system will make adjustments in 15 second intervals with the discontinuity in data being almost indiscernible. $7\frac{1}{2}K/site$

B- Spacecraft Systems:

- I- Primary spacecraft systems can be altered so that the major ship borne emitters of interest will be optimized in their respective collection system by slight alterations of the band-edges of the Filter characteristics.

The collection systems addressing the O/S targets could be duplicated in the four Primary spacecraft to a higher degree than currently planned, thus providing greater collection potential against those emissions which are only rarely intercepted through Soviet Emission Control EMCON practices, by doubling the "Time Over Target" collection aspects for Ocean Surveillance.

[] collection coverage now planned was selected for Mission 7107 in the months of January through April before Ocean Surveillance was a major consideration and therefore it has not had adequate attention.

- B- In an endeavor to reduce the overall data density in X-Band so that certain priority signals can be more adequately identified and processed for location, it has been suggested that a Comb-Filter with 20 MHz band-pass segments be included.

- C- Full utilization of the collection capability potential could be oriented toward the Ocean Surveillance requirements in the R&D or 5th spacecraft in Mission 7107.

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TOG AGENDA

[REDACTED] 0, 28 JANUARY 1971

ROOM 586, BUILDING JP-1

1. Program C organization changes and location. (P/D)
2. Status 05 and 06. (NSG/NRL)
3. Progress 07 and 08. (NRL)
4. Status [REDACTED] (NRL)
5. Reindeer Station. (P/D)
6. [REDACTED] Update. (P/D)
7. HRB Rep visit to [REDACTED] (NSG)
8. [REDACTED] for 07. (NSA/NRL)
9. Ephemeris status, ETE and STF. (NSG/Caswell)
10. Calibration 06 and 07. (NSA/NRL)
11. Augmentation status. (NRL)

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Jointly*

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OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

5614-26:FH:bf
DATE: 22 January 1971

TO : ~~TOP SECRET~~ Code 5600
Via : Code 5600
FROM : Code 5614

SUBJECT: Computer Augmentation Aspects, Program "C"

1. Presently this program has a total of six identical SEL 810A computer systems including peripheral for each system. None of these six systems were purchased for program "Augmentation", but were deployed or scheduled to be deployed for normal program operation for the following stations:

System	Station	Operational Date
(1)	[redacted] (Operational station)	Apr 1967
(2)	[redacted] (Operational software development)	Feb 1967
(3)	[redacted] (Operational station)	Apr 1969
(4)	[redacted] (Engineering Development and Training)	Sept 1970
(5)	[redacted] (Operational station)	Scheduled May 1971
(6)	NRL (Advanced research software development)	(Apr 1972)

a. Systems one through four were deployed as shown above. System 5 has been diverted from [redacted] (pending completion of the operations building at that station) and has been shipped to [redacted]. This will "augment" this station's ocean surveillance capability pending installation of the SEL-86 type computer due in about 10 months. This second SEL-810A system #5 should be operational within the next month in [redacted].

b. System 6 is presently completing acceptance testing and will be ready for deployment to [redacted] when the building is completed, about late April or early May 1971.



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22 January 1971

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[] can be returned from [] to NRL to
ed software development by a civil servant
the contractor dependency in this critical

2. For "augmentation" of the program, two SEL-86 type computers will be procured. One will be shipped to HRB-Singer, [] [] for operational software development. The second will be deployed to [] for operational use. At that time, the SEL-810A (system #5) that was diverted to [] can be returned to NRL. Note that NSG has proposed that it be deployed to [] Whether the second SEL-810A at the [] station will be returned to NRL or will remain at the station for increased processing capability has not been determined yet.

3. All SEL-810A computers are now scheduled for minor modifications necessary for interfacing to the PDE equipment to be deployed to the operational stations.

Reid D Mayo
REID D. MAYO
Code 5614

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