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NASA USE OF MOL CLASSIFIED RESIDUALS

BACKGROUND

- o June 30, 1969, SAF Memo to SAFRD.
 - Established Ad Hoc Group to review and recommend disposition of MOL residuals. NASA represented.
- o September 12, 1969. Two letters from Dr. H. Newell, NASA to Secretary Seamans
 - Study use of ATS/Mission Simulator for AAP/EOP.
 - Study application of MOL optical technology and hardware to NASA space astronomy program.
- o September 29, 1969. Letter from Sec Seamans to Dr. Newell.
 - SAF agrees to NASA study of ATS/Mission Simulator applications to AAP (BYEMAN).
 - SAF agrees to NASA exploring use of MOL optical technology and hardware.

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NASA USE OF MOL CLASSIFIED RESIDUALS

BACKGROUND CONT.

- Accents offer of Air Force participation.
- Defines policy questions pending outcome of studies.
- o November 4, 1969. NASA-Defense Purchase Request.
 - "For services to be provided by the Air Force to conduct studies..."
 - Authorized \$225,000.00..
- o November 7, 1969. AF bills NASA on SF 1000 (For advanced payment).
- o November 7, 1969. Letter from Dr. Newell to Dr. McLucas.
 - Transmitted statement of work for ATS/Mission Simulator study with G.E. and ITEK.
 - Invites Air Force technical participation in the effort.

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NASA USE OF MOL CLASSIFIED RESIDUALS

THE NASA ATS/MDS STUDY

Contractors

- o Prime - General Electric, Missile and Space Division, Valley Forge, Pa.
- o Directed Subcontractor - ITEK, Boston, Mass.

Objectives

"To provide NASA with information required to determine the feasibility and advisability of:

- a. Integrating the ATS into the Saturn V Workshop (AAP-1) and,
- b. Utilizing the MDS, in its existing or modified configuration, as a research tool in determining the value of manned optical systems in earth survey space missions."

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NASA USE OF MOL CLASSIFIED RESIDUALS

THE NASA STUDY CONT.

Study Plan

- o Duration of 60 days.
- o Oral progress report at 30 days.
- o A final summary briefing and written report.

Study Tasks

- a. Locate, identify, and determine status of all applicable hardware and software from MOL. Contractor to notify Government if any equipment produced under MOL contracts appears in jeopardy. (Note. MOL instructed contractor to hold all until 1 Dec. MOL Program Office thru Systems Office has asked contractor for estimated costs to hold inventory from 1 Dec to 1 Feb).

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THE NASA STUDY CONT.

Study Tasks Cont.

- b. Perform configuration study for adaptation of the ATS to AAP-1.
- c. Interface definition:
 - 1. Environmental
 - 2. Thermal
 - 3. Structural
 - 4. Electrical
 - 5. Pointing and control
- d. Generate unclassified document for release within 30 days from study initiation which defines ATS characteristics and interface requirements.
- e. Provide support, as required, to NASA for the generation of an integration plan for the ATS on AAP-1.

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THE NASA STUDY CONT.

Study Tasks Cont.

- f. Perform acquisition program planning.
 - 1. Generate a minimum change, minimum time program plan.
Identify high risk areas.
 - 2. Develop alternative plans for high risk areas.
- g. Identify flight system additions which will enhance the experimental value of the ATS/AAP combination.
- h. "...Describe and evaluate candidate ATS flight applications in the areas of earth surveys, navigation, astronaut performance and man/machine interface evaluations, which exploit the full capability of the ATS equipment and maximize the contribution of man."

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NASA USE OF MOL CLASSIFIED RESIDUALS

THE NASA STUDY CONT.

Study Tasks Cont.

- i. Define those NDS simulations required in support of an ATS/AAP system.
- j. Delineate the baseline simulator system, less highly-classified elements peculiar to NOL, and specify simulations in support of manned earth-orbiter missions. Develop other additional pertinent simulator applications.

Security Guidelines

- o Comply with security annex to the contract (BYEMAN).
- o Documents will not reflect government involvement--classified as appropriate (I.S.M.).
- o Documents handled in BYEMAN system until released by contracting officer.

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THE NASA STUDY CONT.

Proposal

At no expense to the government, contractor will prepare a detailed proposal and program plan including costs to sanitize existing applicable BYEMAN documentation.

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NASA USE OF MOL CLASSIFIED RESIDUALS

NASA STUDY TASKS OF SPECIAL AIR FORCE INTEREST

- h. "...Describe and evaluate candidate ATS flight applications in the area of earth surveys, navigation, astronaut performance and man/machine interface evaluations, which exploit the full capability of the ATS equipment and maximize the contribution of man."
- i. Define those MDS simulations required in support of an ATS/AAP system.
- j. Delineate the baseline simulator system, less highly-classified elements peculiar to MOL, and specify simulations in support of manned earth survey missions. Develop other additional pertinent simulator applications.

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NASA USE OF MOL CLASSIFIED RESIDUALS

NASA STUDY TASKS OF SPECIAL AIR FORCE INTEREST

- h. "...candidate ATS flight applications...earth surveys, navigation, astronaut performance and man/machine interface evaluations,...."
- o Tailor experiments for military applications.
- Mission tasks
 - Recce; [REDACTED] ABM; Activity Indicators.
 - Comparison of manned vs automatic operations
 - Practicality of real-time programming.
 - Value of supplementary crew data.
 - Crew time-line scheduling and work loads.
 - Future applications.

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NASA USE OF MOL CLASSIFIED RESIDUALS

NASA STUDY TASKS OF SPECIAL AIR FORCE INTEREST

- i. "...MDS simulations required in support..."
 - o Establish firm ground data base for flight planning and post flight analysis.
- j. "..., and specify simulations in support..."
 - o Establish the relationships between ground simulation and actual mission performance.

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