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March 28, 1961
Number 5160.34
GenCoun, DOD

DEPARTMENT OF DEFENSE DIRECTIVE

Subject: Reconnaissance, Mapping and Geodetic Programs

Reference: (a) DOD Directive 5160.32, "Development of Space Systems"

I. Purpose

This Directive assigns responsibilities for research, development, and operational activities in the fields of reconnaissance, mapping and geodetic programs.

II. Reconnaissance Satellites

The Department of the Air Force will be responsible for:

1. Research, development and operation, including payload design, launch, guidance, control and recovery of all DOD reconnaissance satellite systems.

2. Research and development of all instrumentation and equipment for processing reconnaissance data from satellite sources.

III. Geodetic controls and mapping production

A. The Department of the Army will be responsible for the establishment and management of a single geodetic and mapping program to meet the total requirements of the Services and the Department of Defense in consonance with priorities established by the Joint Chiefs of Staff. This responsibility will include the establishment and maintenance of a world-wide master geodetic control system and geodetic library and the production and dissemination of geodetic data and topographic maps as required by Department of Defense agencies. In addition, it will include the establishment of a mapping and geodetic data collection program responsive to the needs of the three military departments and under the broad priorities established by the Joint Chiefs of Staff. The Department of the Army will be responsible for maintaining a research and development program in basic geodetic methods.

B. The Departments of the Navy and the Air Force will be responsible for exploitation of the basic information provided by the Department of the Army to meet their unique Service requirements.

IV. Mapping and Geodetic Satellites

A. The Department of the Army will be responsible for:

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1. Establishment of detailed specifications for the development of mapping and geodetic satellite payloads and the operational coverage required of such payloads to satisfy it over-all data collection program.

2. Research, development and operation of all systems for processing and reduction of raw data accruing from geodetic and mapping satellites.

B. The Department of the Air Force will be responsible for:

1. Research and development of all geodetic satellite Systems exclusive of data processing and data reduction, to meet the detailed requirements established by the Department of the Army.

2. Operation of geodetic satellite systems (excluding data processing and data reduction) as required to meet the schedule and coverage prescribed by the Department of the Army. The Air Force will provide operational boosters and payloads and the launch, control, guidance and recovery operations, and will deliver the collected raw data to the Department of the Army for processing.

3. Any exceptions to the foregoing will be determined in accordance with DOD Directive 5160.32 (reference (a)).

V. Mapping and Geodetic Systems Other Than Satellite

A. The Department of the Air Force will be responsible for research, development and operation of all cartographic photograph and geodetic systems (excluding data processing, other than field computations) requiring the service of manned high performance aircraft, in accordance with the requirements and schedule provided by the Department of the Army.

B. The Department of the Army will be responsible for research, development and operation of ground-based mapping and geodetic systems (including [redacted] components carried aboard instrumented probes and non-geodetic satellite systems), and the data processing and data reduction instrumentation and equipment associated therewith.

C. The Department of the Navy will be responsible for:

1. Research, development and operation of all oceanographic and geophysical equipment required for the survey of the ocean areas.

2. Performing geodetic operations ashore, as necessary, to position electronic aids for navigation at sea and for temporary electronic aids required for, oceanographic survey operations.

3. Providing to the Department of the Army processed data in accordance with requirements established by the Department of the Army geodetic program.

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VI. Operational Priorities

The operational acquisition of geodetic and reconnaissance data and mapping information will be carried out under the broad priorities established by the Joint Chiefs of Staff.

VII. Effective Date

This directive is effective upon publication.

/s/ Roswell
Deputy Secretary of Defense

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THE SECRETARY OF DEFENSE
WASHINGTON

March 6, 1961

MEMORANDUM FOR THE SECRETARIES OF THE MILITARY DEPARTMENTS
THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
THE CHAIRMAN, JOINT CHIEFS OF STAFF
THE ASSISTANT SECRETARIES OF DEFENSE
THE GENERAL COUNSEL
THE ASSISTANTS TO THE SECRETARY OF DEFENSE

SUBJECT: Development of Space Systems

Having carefully reviewed the military portion of the national space program, the Deputy Secretary and I have become convinced that it could be much improved by better organization and clearer assignment of responsibility. To this end, I directed the General Counsel of the Department of Defense to obtain your comments on a new draft DOD Directive, "Development of Space Systems."

After careful consideration of the comments and alternate plans that were submitted, the Deputy Secretary and I have decided to assign space development programs and projects to the Department of the Air Force, except under unusual circumstances.

This assignment of space development programs and projects does not predetermine the assignment of operational responsibilities for space systems which will be made on a project by project basis as a particular project approaches the operational stage, and which will take into account the competence and experience of each of the services and the unified and specified commands.

We recognize that all the military departments, as well as other Defense agencies, may have requirements for the use of space equipment. The directive expressly provides that they will continue to conduct preliminary research to develop specific statements of these requirements, and provides a mechanism through which these requirements may be fulfilled.

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Attached is a directive incorporating this decision. We expect all elements of the Department of Defense to support it fully and to help develop the military portion of the national space program in the most effective manner.

Robert S. McNamara

Encl.
DOD Dir. 5160.32

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Department of Defense Directive

SUBJECT Development of Space Systems

References: (a) Memorandum (Conf) from Secretary of Defense to Chairman, Joint Chiefs of Staff, subject: Satellite and Space Vehicles Operations, September 18, 1959

(b) Memorandum from Director, Advanced Research Projects Agency to Secretary of the Army, Secretary of the Navy, and Secretary of the Air Force, subject: Study Contracts for Projects Assigned to the Advanced Research Projects Agency, September 14, 1959

(c) Memorandum (Conf) from Director of Defense Research and Engineering to the Secretary of the Army, the Secretary of the Navy, the Secretary of the Air Force, and Director, Advanced Research Projects Agency, subject: ARPA Programs, June 11, 1959

I. PURPOSE

This directive establishes policies and assigns responsibilities for research, development, test, and engineering of satellites, anti-satellites, space probes and supporting systems therefor, for all components of the Department of Defense.

II. POLICY AND ASSIGNMENT OF RESPONSIBILITIES

A. Each military department and Department of Defense agency is authorized to conduct preliminary research to develop new ways of using space technology to

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perform its assigned function. The scope of such research shall be defined by the Director of Defense Research and Engineering in terms of expenditure limitations and other appropriate conditions.

B. Proposals for research and development of space programs and projects beyond the defined preliminary research stage shall be submitted to the Director of Defense Research and Engineering for review and determination as to whether such proposals, when transmitted to the Secretary of Defense, will be recommended for approval. Any such proposal will become a Department of Defense space development program or project only upon specific approval by the Secretary of Defense or the Deputy Secretary of Defense.

C. Research, development, test, and engineering of Department of Defense space development programs or projects, which are approved hereafter, will be the responsibility of the Department of the Air Force.

D. Exceptions to paragraph C will be made by the Secretary of Defense or the Deputy Secretary of Defense only in unusual circumstances.

E. The Director of Defense Research and Engineering will maintain a current summary of approved Department of Defense space development programs and projects.

III. CANCELLATION

Reference (a), except as to the assignments of specific projects made therein, and references (b) and (c) are hereby cancelled.

IV. EFFECTIVE DATE

This directive is effective upon publication. Instructions implementing this directive will be issued within thirty (30) days.

Robert S. McNamara

Secretary of Defense

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Notes concerning the May Experiment

Jan 60?

Flight Hardware has been ordered from the following Companies:

1. Filters from Telonics to be delivered by 28 March.
   a. These are individual band-pass filters and must be combined through an NRL designed Hybrid to work from the antenna. Diplexing
2. /Filter- Detector Units from Applied Research Inc. with delivery 2 by 24 Mar and 16 by 30 Mar and 6 by 7 April. This unit is a combined filter for both High and Low bands and has the crystal detector built into the unit.

3. Crystal Mounts have been ordered from American Electronic Labs to work with the Telonic Filters with delivery scheduled befor the 30 March.

4. NRL is building the antenna for use in this "L-Band" experiment. 12 units have been supplied to the packaging group.

There are several possibilities or combinations of these components which can give us a flyable experiment if the contractors meet the promised delivery schedules. Based on the sensitivity and the expected delivery it has been decided to pursue the following course of action:

The packaging group is preparing to accomodate the Telonic Filters and the Crystal Detector Mounts from American Electronic Labs.

The hardware which is not used in the May experiment will find use in one of the following experiments.

At this time it would seem that the work which remains in order to prepare the components for this experiment would require more time than is available; the first completed flight unit must be in the field on or about 9 April. At least three week is necessary to carry out the environmental testing on the completely assembled package. This means that we are already about three weeks short of time already. Votaw is examining the other areas for requirements for additional time and shortly a request will go through asking for an extension of the launch date. The magnitude of this extension in time has not yet been determined.

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