

THE WHITE HOUSE
WASHINGTON

10, 107/67 TCS



February 3, 1967

MEMORANDUM FOR

- The Honorable Stewart L. Udall, Secretary of the Interior
- The Honorable Orville Freeman, Secretary of Agriculture
- The Honorable Alexander Trowbridge, Secretary of Commerce
- The Honorable James E. Webb, Administrator, NASA
- The Honorable William S. Gaud, Administrator, AID

During the past year, more and more interest has been developing in potential use of satellite borne sensors for earth resource and economic surveys and there has been discussion about satellite systems to collect data in support of agency missions. I think it goes without saying that before proceeding with any experimental or operational systems, you will want to establish that the data to be acquired is truly useful and worth the system costs, or -- for experimental systems -- that there is a sufficient potential for deriving such data.

It is relevant then to take note of the fact that photographs already exist in the files of the intelligence agencies which cover great portions of the earth's surface at resolutions up to 10 feet and certain areas at resolutions of 3 feet. A very small portion of the photography is in color. I do not think that any of us will be willing to make a program decision in the future without first reviewing this data. Nor does it seem sensible for your agencies to plan for future systems without the benefit of the information contained in these files.

In recognition of this, the Director of Central Intelligence has agreed to permit a small number of specialists from your agencies to be cleared and given access to the available photography. Although the intelligence community is not able to provide space for this purpose in the facilities of NPIC or AMS, the Corps of Engineers has offered the use of the fully cleared facility of its contractor, Autometric/Raytheon, in Alexandria, Virginia. (In this facility, GIMRADA, a mapping R&D agency of the Corps of Engineers, has already used the satellite photography to make a geographic survey of Africa and it is planning a similar effort in Central and South America.) The Director of Central Intelligence and the Secretary of Defense have therefore agreed that the Autometric/Raytheon facility be used to support the civil agency evaluation and that GIMRADA

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be the coordinator and interface between the agency teams and the intelligence community.

Under this agreement, a team from each of your agencies, consisting of specialists in the earth resource disciplines of interest to you, would work at the Autometric facility with GIMRADA as its host, receive advice and guidance from the experts from the intelligence agencies and participate in an evaluation of the data. Each agency would be expected to reimburse GIMRADA for the cost of services rendered its team by Autometric. I propose that after an orientation period each team conduct its own separate evaluation under the supervision of its parent agency, and produce a classified technical report describing its findings. Periodic progress reports in the form of classified seminars can be conducted at appropriate intervals.

In addition to its potential contribution to future systems, we should recognize that resource information derived from existing satellite photography may be immediately useful to AID. In view of this and the fact that your teams will not be able to plan their evaluation until they have some experience with the data, I propose that as part of their orientation they work with GIMRADA in a survey of selected Central or South American regions of special interest to AID, and under the guidance of GIMRADA produce a joint resource assessment of these areas as a classified supplement to existing resource inventories. This will allow AID to evaluate the use of this technique for its own purposes and, in addition, provide a period during which the teams can develop the detailed guidelines for their subsequent evaluation.

I propose then that the initial goals of this program be:

1. A resource assessment report on selected Latin American regions of interest to AID, conducted by the teams under the guidance of GIMRADA, and

2. A detailed set of guidelines from each agency team describing how it will conduct its subsequent study on behalf of its special agency interests. I propose that these guidelines be reviewed by you and me and then become the basis for the next phase of the teams' activities.

In connection with the above, we should note that NASA has an important stake in this evaluation as it applies to the design and development of future space systems and has already organized a small advisory group from among the potential users to help NASA extract early indications

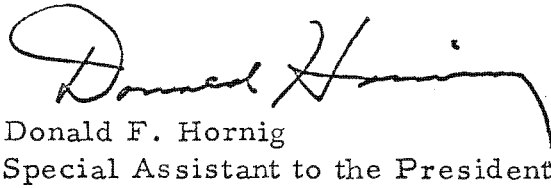
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for future space systems designs from existing data. The individuals in this group will no doubt be among those that you select to do the data evaluation itself and it appears appropriate that they also act in this advisory capacity for NASA.

I have attached a detailed plan which describes the functions and responsibilities of the DOD and CIA organizations and the conditions agreed to by Mr. McNamara and Mr. Helms under which this evaluation can proceed. I hope you agree with me that it is important that we take advantage of this opportunity to review this previously unavailable data.

If you find no difficulties with this plan from your standpoint, I would like to proceed as expeditiously as possible and would appreciate having the names of the individuals whom you want to have participate. I suggest that, in addition to those individuals whom you wish to actively participate at Autometric, you let me know the individual who will supervise and provide technical guidance to these people and represent you in any interagency coordination meetings that may be necessary.

Please let me know if there are any aspects of this that I can discuss further with you.



Donald F. Hornig
Special Assistant to the President
for Science and Technology

Enclosure - #10,106/67

PROGRAM PLAN
STUDY OF SATELLITE PHOTOGRAPHY
FOR
EARTH RESOURCE INFORMATION

10,106/67 TCS

This program describes a procedure whereby small teams of earth resource experts from the civilian agencies can, on a fully classified basis, study the existing classified aircraft and satellite photography. The need for such a program arises primarily from the fact that more and more interest has been developing in the use of satellite borne sensors for earth resource surveys and the likelihood that civilian agencies will eventually propose operational or experimental systems. It recognizes that these agencies should not be required to plan such systems without the benefit of the information already available, and it assumes that no space program of this kind will be approved unless its justification reflects a thorough study of existing photography. Secondly, the program reflects the fact that AID requires physical resource inventories of underdeveloped nations as a basis for its plans and operational decisions. It assumes that if existing photography can provide information not otherwise available, it should be exploited and made available to AID on a classified basis.

Objectives

Reflecting these requirements, the objectives of the program are as follows:

1. To evaluate the existing aircraft and satellite photography and describe its usefulness for physical resource surveys and its bearing on the design of future systems.

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2. To develop a cadre of civilian agency personnel who will know what information is available and how the photography can be used.

3. To produce as a by-product a resource inventory of typical areas of interest to AID to show what might be done with the existing photography and to determine whether such a program is worth continuing.

Composition of Study Teams

To meet these objectives, the Secretaries of Interior, Agriculture, and Commerce will appoint individuals technically qualified in the various resource disciplines to participate in the program. The disciplines to be covered will include geography, geology, hydrology, agriculture, forestry and oceanography. Each agency will appoint one or two experts in each of the disciplines for which it has a responsibility. The Administrators of NASA and AID will appoint up to two participants each. The number of participants will be limited by space, equipment and instructor personnel available at NPIC and DIA and by study work space for only 15 persons at the contractor facility.

Location of the Work

These agency teams will be physically located at Autometric/Raytheon in Alexandria, Virginia, a fully cleared facility under contract to GIMRADA (Geodesy Intelligence Mapping Research and Development Agency) of the Corps of Engineers. Autometric will provide space, viewing and measuring equipment and technical services such as photo reproduction, drafting, report reproduction, etc. The participating agencies will reimburse GIMRADA for costs incurred by their teams at Autometric.

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Work Schedule and Agency Responsibilities

The agency teams will follow a work plan and schedule divided into three consecutive phases:

Phase 1: An orientation period of several weeks in which the National Photographic Intelligence Center (NPIC) and the Defense Intelligence Agency (DIA) instruct the agency teams in the techniques of photo interpretation and pass on the knowledge they have accumulated about the use of the photography for resource assessments.

GIMRADA will coordinate the arrangements and the agenda for the orientation, being responsive to the desires of NPIC and DIA who would plan and conduct the substantive briefings at Autometric or other facility as they wish.

Phase 2: Production of a resource inventory of Central or South American areas selected by AID. Concurrently, the development of a detailed plan by each agency for its subsequent study (in Phase 3) of the usefulness of photography for resource information of individual agency interest. (3 months).

The resource inventory will be a joint effort by the civilian agency teams and the intelligence community. To insure coherency in the planning and in the conduct of the inventory, GIMRADA will assume responsibility as group leader and coordinate the development of a joint report on the selected areas. During Phase 1, AID will determine the areas to be inventoried, basing its selection on the advice of the other teams, on its own

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operational requirements and on the concurrence of the CIA and DIA who will review the selection from a security standpoint.

Also during this phase, each team, under the supervision of its parent agency, will write the plans for its subsequent study of classified photography in terms of its value to the individual agency interests. At the end of Phase 2, each team will submit its plan to its agency head and to the Office of Science and Technology for review.

Phase 3: The conduct of the evaluation and preparation of agency reports. After approval of the plans submitted at the end of Phase 2, each agency team will proceed independently with its evaluation. Based on this work, each agency will write a classified technical report on its findings concerning the usefulness of this kind of material for resource inventory purposes.

At least two classified seminars will be held in which team members can present their progress and findings to interested people from the intelligence community, the civilian agencies and the Executive Offices. GIMRADA will act as host and coordinate the arrangements for these seminars.

Security Control

The teams will, in general, be given access to U-2, Daff, KH-4, KH-7, and all index photography of non-sensitive areas; however, NPIC, in coordination with other CIA components and DIA, can make exceptions to this rule on a case by case basis. The agency teams will place all their

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requirements for such photography through GIMRADA to NPIC for approval and procurement of material. CIA will provide guidelines to be used by NPIC in determining non-sensitive areas, subjects and other related security controls to be applied to the release of these materials. Inventories of supporting material will be checked with appropriate participants to insure these materials are not already available to them.

All information, data and reports resulting from this program will be classified appropriately as specified by the Director of Central Intelligence. GIMRADA, being the custodian of the Autometric contract, will be responsible for security within the Autometric facility.

Coordination and Administration

GIMRADA, as custodian of the Autometric contract, will assume the responsibilities of host and administrative coordinator of the teams' activities within the Autometric facility. As such it will arrange for the teams' administrative needs, coordinate the details of financial reimbursement, and make arrangements and act as host for the classified seminars.

The Office of Science and Technology will chair a committee with membership from Interior, Commerce, Agriculture, NASA, AID, CIA and DOD to coordinate matters not covered by the responsibilities assigned above. NPIC will serve as a consultant to this committee as needed.