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The Director of Central Intelligence

Washington, D.C. 20505

[Redacted] STAT

Intelligence Community Staff

DCI/ICS 83-4239
9 February 1983

MEMORANDUM FOR: Becky Norton Dunlop
Director, Office of Cabinet Affairs

SUBJECT: Comments on Decision Memorandum: Transfer of Civil
Space Remote Sensing Systems to the Private Sector

[Redacted] STAT

1. We have reviewed the subject Decision Memorandum and agree that national security concerns must be addressed as part of Option 1. We are satisfied that the establishment of an interagency coordinating body will provide us a forum to consider any security concerns as the private sector involvement unfolds. [Redacted]

STAT

2. As you requested, we have provided, at attachment, specific recommended changes to the Decision Memorandum. [Redacted]

STAT

STAT

[Redacted signature area]

Eloise R. Page
Acting Director

Attachment:
a/s

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COMMENTS ON
TRANSFER OF THE CIVIL SPACE REPORT SENSING
SYSTEMS TO THE PRIVATE SECTOR

- o Background, third paragraph: Change first sentence to read:

All parties believe that it is possible that a self-supporting, successful private venture or ventures could evolve. The length of time required for such a market to develop is uncertain. The Government

Rationale: Accuracy

- o Background, fourth paragraph: Change last sentence to read:

If an aggressive private sector is given the opportunity to develop the market base for this product, it is possible that this market could experience significant growth.

Rationale: Accuracy

- o Background, eighth paragraph: Revise as follows:

The Cabinet Council on Commerce and Trade has conducted an extensive review of the issue. This included a formal request to industry for information, the results of which were reviewed by two advisory committees, one from the concerned Federal agencies and one from the private sector. Collectively, these reviews raised some concerns about the near term viability of proceeding with commercialization at this time. Summaries are attached. The Cabinet Council on Commerce and Trade has identified two principal options for your consideration:

Rationale: Completeness. The President should have the benefit of the Advisory Committee perspectives on this important issue. Copies of the above referenced summaries are at Attachment 2.

- o Option 1: Modify paragraph (1) as follow:

National security and foreign policy concerns must be appropriately addressed in preparing legislation, requesting proposals, and overseeing the private entity or entities.

Rationale: Protecting national security interests is mandatory.

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- o Option 1: Modify (2) and (3) as follows:

Change would in line one in each instance to must.

Rationale: Consistency with previous recommendation.

- o Option 1: Modify (2) second sentence as follows:

Private firms would have the option of bidding separately for the land or weather satellite system (or portions thereof) or preparing a joint submission for both.

Rationale: Many of the industry respondents expressed an interest in bidding on only part of the system.

- o Option 1: Add the following Disadvantage:

- o Sensor improvements and technology developments could lead to systems that would heighten national security concerns.

Rationale: As technology advances, improved system resolutions could be achieved resulting in products of significant intelligence utility to other countries, including those hostile to the US.

- o After presentation of Option 1 and Option 2, insert the following:

If Option 1 is chosen, the results of the competitive bid procedure will be provided for your review prior to a final decision or selection.

Rationale: Ensures that the President and the using organizations are provided a firm understanding of the cost implications of the decision.

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FINAL RECOMMENDATIONS

THE COMMITTEE BELIEVES, WITHOUT RESERVATION, THAT THE U.S. GOVERNMENT MUST COMMIT ITSELF IN THE BEST INTEREST OF THE NATION TO THE CONTINUITY OF A GOVERNMENTAL AND/OR PRIVATE SECTOR CIVIL LAND REMOTE SENSING SYSTEM. THIS CONVICTION STEMS NOT ONLY FROM THE ROLE REMOTE SENSING TECHNOLOGY WILL PLAY IN ENHANCING THE ECONOMIC BASE OF THE COUNTRY BUT ALSO FROM THE PERVASIVE INFLUENCE SUCH INFORMATION WILL HAVE ON IMPROVING THE FUTURE QUALITY OF LIFE ON EARTH.

THEREFORE, WE RECOMMEND THAT:

1) THE GOVERNMENT OF THE UNITED STATES WILL ATTEMPT TO NEGOTIATE AN ARRANGEMENT WITH PRIVATE INDUSTRY TO OWN AND/OR OPERATE UNDER CONTRACT SPECIFIED SPACE AND GROUND SEGMENTS, UP TO AND INCLUDING ONLY ARCHIVING OF RAW UNPROCESSED DATA, OF THE LAND SATELLITE SYSTEM BY ITSELF, OR BOTH THE METEOROLOGICAL AND LAND SATELLITE SYSTEMS.

2) THE GOVERNMENT OF THE UNITED STATES WILL MAKE A FIRM, LONG RANGE COMMITMENT TO CONTINUE TO PROVIDE OR CAUSE TO BE PROVIDED VIABLE R&D PROGRAMS ON BOTH THE LAND AND METEOROLOGICAL SATELLITE PROJECTS.

3) THE REQUIREMENT BE MADE THAT THE OPERATOR, WHETHER IT BE THE GOVERNMENT AND/OR THE PRIVATE SECTOR, SUBSCRIBE TO THE OPEN SKY POLICY - WHICH PRIMARILY MEANS THAT ANYONE, ANYWHERE, IN ANY COUNTRY CAN PURCHASE THE DATA AT EQUITABLE PRICES.

4) ALL NECESSARY LEGISLATION AND APPROPRIATIONS BE ENACTED AT ONCE TO IMPLEMENT THESE RECOMMENDATIONS.

THE LAND REMOTE SENSING SATELLITE ADVISORY COMMITTEE UNANIMOUSLY ENDORSES THIS REPORT AND ITS RECOMMENDATIONS AND OFFERS ITS CONTINUED ASSISTANCE TO SECRETARY BALDRIGE IN THE IMPLEMENTATION OF THIS REPORT.

SUMMARY OF FINDINGS OF THE WORKING GROUP ON COMMERCIALIZATION

Members of the Working Group were in unanimous agreement that commercialization of activities within the Government which were not inherently governmental should enhance the development of the economic base of the country. Such commercialization should also lead to expanded tax revenues and introduction of better operational systems because the needs of the marketplace should drive the requirements for current technology. It was generally felt that commercialization should be accomplished in the environment of an open marketplace which encourages free enterprise and healthy competition on both a domestic and international scale.

The majority of the responses indicated that commercialization should occur gradually beginning with the ground data handling segment of the land remote sensing system. All responses indicated that the market for land remote sensing data was not developed to a point where commercial viability could be

demonstrated within the next ten years. Generally most respondents felt that designation of a sole operator, which would have exclusive and proprietary rights to the data from acquisition to delivery to users, under conditions of guaranteed subsidy and guaranteed tax incentives would severely limit the degree of natural market development. The Working Group also felt it was absolutely essential to get the Government out of those elements of land remote sensing which affect the market directly. Specifically those elements involve services to: 1) convert raw data into images in computer compatible tape and film product form; 2) enhance, process and analyze image data; and 3) distribute image data to non-government users.

International competition in civil remote sensing was regarded as healthy, however the Working Group felt that it was important to recognize that the most serious foreign competitors in the data market (France and Japan) write off the costs for operation of their space segments in the hope that the activities of their ground segments will lead to new information technologies that will rapidly enhance growth and development of their economies. For this reason it is doubtful that a United States commercial venture, which recovers the costs for operation of the space segment, will be able to compete on an international basis without Government support. The Working Group also recognized that foreign competitors also write off aggressive research and development efforts within their government as investments in their economic future. Serious concern was expressed by members of the Working Group that the responses only proposed very conservative, proven technologies for new systems to be utilized in the next decade.

Concern was expressed by members of the Working Group that the Government must aggressively support remote sensing research of a fundamental, high-risk

and longer term nature, because such research in development of advance technology will not be done by industry. Industry will focus on applied, low-risk and short-term research to improve profitability using current, proven technology. A program board was suggested as a means for evaluation requirements for research within the Government with respect to the needs for advanced technologies.

The matter of commercialization of weather satellites was carefully analyzed in the light of the responses. The Working Group concluded that there was only a small commercial opportunity associated with weather satellites because the Government is the almost sole user of data produced by them. Therefore the weather satellite systems were judged to be inherently governmental. A large market for weather satellite data might be developed, but the National Weather Service would have to be commercialized before it can be tapped. Members of the Working Group also concluded that there would be a greater efficiency by managing both the land and weather satellite systems as an entity. Common satellite command and control, common data reception, and common raw data recording and archiving facilities could be utilized. Weather data could be used to target land data acquisition and to correct land data for atmospheric effects. The issue of the degree of savings to the Government for combined operation of land and weather systems could not be quantified by the Working Group. We felt that the issue should be more appropriately improved products and services and therefore a more competitive system for the international marketplace.

On the basis of the responses, we concluded that major commercial opportunities exist in the value-added portion of civil land remote sensing. One of

the reasons that market development has been inhibited is that the Government has extended its activities in those areas of data management that are non-governmental and the Government has managed the ground segment in an experimental rather than operational mode. Specifically the Government has developed the system to support the needs of scientific investigators rather than user applicators. Thematic Mapper data are vital for market development. The current lack of availability of Landsat-4 data is testimony to the problem. On the basis of the responses there appears to be industrial interest in receiving land satellite data directly, and distributing such data in near real time to users. Although there is a perceived need to have data archived in raw form and also to provide the Government with near real-time data, the Working Group felt the commercial sector should also be permitted to have direct access to the down-linked Government data stream. Access to this Government data stream should be permitted on a cost reimbursable basis. The Working Group concluded that value-added industries should be allowed to develop pre-processing services that would format raw data to images in film and computer compatible tape (CCT) form. Users having a need for raw, unprocessed data should be allowed to obtain copies of such data directly. Users having a processing and analysis capability could order film and CCT data directly from such value-added industries, or those lacking a level of sophistication in image processing could also request additional services (Attachment 6).

The Working Group also recognized that there would be an efficiency in management that would derive from operation of the space segment by a sole entity. Certainly a hand-off to the Department of Defense in times of emergency would be facilitated. However, the Working Group felt that it was not clear

that a hand-off of the ownership and management of the space segment to an industrial entity would lead to increased profit opportunities for the aerospace industry. On the basis of the majority of the responses the Working Group concluded that if a sole entity is selected to operate the space segment its span of control over the data should only extend to the raw, unprocessed data. Secondly, the Working Group concluded that if Government facilities are utilized in any manner, or a Government subsidy is provided, such raw data should be placed into a National archive in the public domain. The sole entity operating the space segment should not be allowed to compete unfairly with the value-added industry in furnishing processed and analyzed data to users. At the same time there was a concern that the market must drive data acquisition technology, data acquisition plans, etc., if commercialization is to succeed. It was concluded that a review board should be formed to reconcile the differences between market requirements generated by users, the needs of the value-added industry and the needs for new efficient data collection technology.

Several responses indicated a desire to fly their own specialized sensors and have proprietary rights to the data provided by such sensors. Because there is not market which could support such a possibility in the near term (the next 10 years) the Working Group felt the Government could stimulate commercial opportunities of this kind by providing launch services and/or access to satellite platforms in the near term. If public monies are used, then data so acquired could be placed into the public domain, but the Government should not be allowed to distribute such data, except for its own internal use.

Finally, with respect to a specific response proposing hand over of both the weather and land satellite systems, the Working Group concluded that natural (as opposed to subsidized) commercialization would be adversely affected if a sole

entity was given proprietary rights to the data and had control over the data to include value-added services and data distribution to users. The Working Group concluded that if the operation of the weather and land satellites is handed off to a single industrial entity, that control over the data should only extend to raw, unprocessed data that is archived in a National facility.

Report of the Government Technical Review Panel
on Industry Responses on Commercialization of
the Civil Remote Sensing Systems.

I. OVERVIEW

The panel convened on 26 October and reviewed fourteen responses to the Request for Information that appeared in the Commerce Business Daily (CBD) on September 10, 1982. No attempt was made to solicit additional information or clarification from respondents.

The responses varied in scope and sophistication from a handwritten postcard to a fairly comprehensive, all inclusive submission. Criteria for evaluation could not, therefore, be applied uniformly to all proposals. However, the following general criteria were used, as applicable:

- (1) Responsiveness to federal needs;
- (2) Continuity of data services;
- (3) Feasibility; and
- (4) National security and foreign policy concerns.

Responses were grouped into four (4) natural categories reflective of their basic thrust:

- (1) Those favoring near-term commercialization of existing civil remote sensing capabilities, entirely or in part.
- (2) Those espousing independent entrepreneurial interests and advocating a climate conducive to free market competition.
- (3) Those favoring government retention of the existing system, at least for the immediate future.
- (4) Other.

II. SUMMARY AND OBSERVATIONS

It could fairly be stated that a simple evaluation of responses to the RFI would fulfill the charter of this panel and that further comment is gratuitous. Nonetheless, our study of this issue and the responses produced a consensus which we would be remiss not to surface.

Insofar as the responses are positive toward the issue of commercialization, they tend to assert rather than demonstrate an ability to satisfy whatever criteria we might establish. Nonetheless, the panel harbors significant doubt as to whether all U.S. government interests could be satisfactorily protected if the approach is simply to substitute one monopolistic organization for another. Perhaps, it will take an RFP to answer the toughest questions.

The RFI elicited more interest than might have been expected and surfaced a strong body of opinion that urges restraint and caution in proceeding with commercialization. There is an underlying theme common to the submissions from several large, responsible, and knowledgeable entities that commercialization now could inhibit the free market process. They suggest continued government operation of the system while fostering an environment conducive to an expansion of free enterprise activities.

One of the concerns which permeated our discussions of a non-government monopoly environment, was the potential lack of vigor in the R&D effort and lack of incentive to adopt improvements which may materialize. This has been the case in the satellite communications field. It is our belief that the best answer to the emerging foreign competition lies in the continuation of a dynamic U.S. government R&D system.

It is also the belief of the panel that there is considerable financial, policy and program risk to the government in commercializing weather satellites and that there is no clear policy or financial benefit to be realized. Too, there is no clear consensus among the respondents as to the desirability or feasibility of commercializing any of our civil remote sensing systems at this time.

Additionally, creation of a single, government-chartered, subsidized firm for this purpose would seem antithetical to the underlying economic philosophy of the United States and, in particular, this Administration, as we understand it. If regulated, it would result in the creation of a "utility" without the competitive incentives for reducing operating costs or increasing efficiency. If unregulated, the chartered entity would tend to assume the characteristics of a legislated monopoly.

Finally, the following general national security concerns exist in commercialization of remote sensing from space even though not specifically addressed in the individual evaluations:

- (1) There is some potential for military and intelligence application of current data products, and
- (2) with possible system improvement under private sector control these concerns would increase.
- (3) There are technology transfer issues which might be exacerbated if a private sector operator became the world wide supplier of remote sensing equipment and spares.
- (4) Controls over data dissemination, and provision for DOD emergency use would require very careful stipulation in any transfer of civil remote sensing activities.