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THE WHITE HOUSE

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April 12, 1984

MEMORANDUM FOR MEMBERS OF THE INTERAGENCY GROUP FOR SPACE

SUBJECT: International Cooperation on the Space Station Program -- Second Draft (C)

Attached is the second draft of the report to the President on International Cooperation on the Space Station Program produced by the IG(Space) drafting team. The report identifies two issues:

- To the extent that foreign participation in elements of the "core" program is realized, should the monetary value of such foreign contributions be considered as off-sets to the $8 Billion U.S. program?

- Should agencies have the authority to assess the technology transfer implications related to programs administered by other agencies? (C)

You will note that the second issue is identical to one identified in the second draft of the NSDD on National Space Strategy previously forwarded for your comment. (U)

We would appreciate your comments on the attached draft no later than COB April 19, 1984. With your comments, we will provide the report to the President and request resolution of the two issues. (U)

Robert M. Kimmitt

for J. M. Poindexter
Deputy Assistant to the
President for National
Security Affairs

Attachment

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Space Station--International Participation

Background

On January 25, 1984, the President announced four goals for keeping America "free, secure and at peace" in the 1980's: ensuring steady economic growth, developing the next frontier--space, strengthening traditional values, and building a meaningful peace. The second of these goals--space--contained three elements:

-- the President directed NASA to begin immediately the development of a permanently manned Space Station so that Americans can be living and working in space within a decade;

-- in order to strengthen our relationships with our friends and allies, he invited them to participate in the development and utilization of the Space Station;

-- to develop the commercial potential of space, he called for government and industry to work closely to stimulate increased private sector investment and involvement in space.

Immediately preceeding his State of the Union Message, on January 24, the President sent a letter to the Heads of State/Government of the Economic Summit countries (Germany, France, the UK, Italy, Canada and Japan). He noted his impending Space Station announcement and his hope that these countries would work with the U.S. on the project. He also indicated that he had asked James Beggs, NASA Administrator, to act as his personal emissary to meet with senior officials of their countries. He noted that Mr. Beggs would be reporting back to him so that a plan for international cooperation could be formulated.

At a January 30 planning meeting for the London Economic Summit, the President expressed support for the idea that the Heads of State/Government issue a statement at the Summit regarding their intention to cooperate with the U.S. on the Space Station. The U.S. has proposed that the Summit partners should "agree in principle to cooperate in the development of an international Space Station, demonstrating that free nations will continue to use outer space for peaceful purposes and for the benefit of all mankind."

Results of Trip

During their trip to foreign capitals, Mr. Beggs and his delegation met with leading political, foreign policy and technical officials, including three Heads of State/Government (Japan, France and Italy). (See Attachment I for list of officials met.) Overall, interest in cooperation with the U.S. in the Space Station was indicated by the high governmental levels at which Beggs was received throughout his trip, and by the positive remarks made in these meetings. It appears that political decisions have already been made in both Europe and Japan to cooperate with the U.S. The primary remaining concerns abroad are: 1) budget constraints where tradeoffs between domestic space programs and cooperation with the U.S. must be made; 2) the need to understand the nature and extent of potential U.S. military involvement; and 3) ability to work out mutually agreeable means of minimizing technology transfer problems and protecting intellectual property rights. It is clear that the London Summit is an important driver and the ability of the U.S. to gain a visible political commitment there remains important to all potential partners. All appeared likely to support the U.S. Summit initiative. (See Attachment II for summary of foreign reactions.)

Goals and Objectives for International Participation

The President has directed NASA to develop a permanently manned U.S. Space Station within a decade. He has also invited this nation's friends and allies to participate in the development program. In implementing the President's instruction for international participation in the Space Station, we must ensure that the broad goals of the U.S. in international cooperation in space activities as outlined in NSDD-42 and NSDD-50 are met. These goals are to promote international cooperative activities in the national interest, to cooperate with other nations in maintaining the freedom of space for activities which enhance the security and welfare of mankind, to protect national security, to promote foreign policy goals, to advance national science and technology and to maximize national economic benefits, including domestic considerations.

Other goals and objectives include:

-- enhance the capability of the $8B baseline U.S. Space Station which the President has committed the U.S. to develop,

-- protect against adverse technology transfer,

-- [reduce U.S. budgetary burden (offset the $8Billion cost of the program),] (OMB)

-- maintain the option for participation of the full range of USG users consistent with national policy and international treaties and agreements to which the U.S. is a signatory,

-- encourage U.S. private sector investment in space, in conjunction with international cooperation.

International participation in the Space Station program must be negotiated and carried out in a way that advances the overall national interest.

Possibilities for International Participation

Mr. Beggs indicated during his consultations overseas that he would see a contribution on the order of $2B from Europe and on the order of $1 - 1.5B from Japan as appropriate considering the level of their space capabilities and efforts.
If we are to achieve the above objectives, our foreign partners will want to do things that appeal to them on the Space Station. To the extent that their interests are compatible with U.S. interests, we should encourage them to formulate and present proposals. Our potential partners all have mature space programs with strong industrial infrastructures and well developed space policies. Their proposals for participation will reflect their own interests.

During NASA's early planning process, Canada, ESA, France, Germany, Italy and Japan conducted separate parallel studies regarding Space Station uses at their own expense. Regular information meetings were held and study results were exchanged. These studies served to uncover ideas for utilizing the Space Station. The conclusions were wide-ranging and generally compatible with NASA's. These foreign-funded utilization studies have, of course, been closely linked to Space Station development interests in the particular countries. (See Attachment III for examples of foreign interests.)

During the next two years, NASA will conduct an extended definition phase study of the Space Station in order to design the Station best capable of meeting requirements, facilitating management and providing flexibility for growth. As time goes on, there will be less and less flexibility in the Station design. Potential partners need to participate in the planning. Foreign insight into this planning process would allow them to hone their ideas for participation; it would also

allow them to feed in their proposals so that the final design accommodates all the parts. NASA will hold frequent international workshops over the next two years to permit this cross-fertilization to occur. The access of any foreign participant to the planning process will be commensurate with the seriousness of its commitment to participate and with the willingness to invest funds in relevant planning activity. This linkage was made clear by Mr. Beggs during his recent visits. We will also invite potential U.S. private sector investors to participate fully in the planning process.

Policy Guidelines for Government-to-Government International Cooperation

It would be premature at this time to generate a firm list of pieces that certain partners could or could not contribute. We will begin negotiations to seek agreements for participation while we are firming up the Station's design. Potential partners' proposals will be evaluated to ensure that foreign participation satisfies U.S. goals and objectives. (All proposals, of course, will be viewed in the context of U.S. industry's interests.)

The following represent general guidelines to international participation which will assist in guiding our negotiations:

Core vs. Additive: [The President has made a major foreign policy initiative by inviting this nation's friends and allies to join us in the Space Station program. Nonetheless, it is important to recognize that the U.S. commitment to the program is not contingent upon foreign participation. The President has directed NASA to develop a permanently manned Space Station within a decade in order to satisfy U.S. civil and commercial requirements, to maintain U.S. space leadership, and to satisfy other goals of the National Space Policy. The program must be conducted so that international participation or lack thereof does not prevent the achievement of the programmatic goal levied by the President. Thus international government-to-government cooperation in the Space Station program will take place on elements which are additive to the core capability of the U.S. Space Station. This approach avoids placing foreign partners on the critical path to achieving the President's goal. At the same time, it also maximizes our negotiating leverage by avoiding the posture of dependence upon potential partners for satisfaction of our domestic goals.](NASA)

[Some of the elements noted in the above sections represent capabilities that would add to the $8B U.S. core Space Station; some represent part of that core. Foreign participation in

core elements will be carefully considered on a case-by-case basis, consistent with U.S. objectives for positive management control, avoidance of adverse technology transfer, and encouragement of greater investment by the U.S. private sector. To the extent that foreign participation in core elements is realized, the monetary value of such foreign contributions will be considered as offsets to the $8B U.S. program.] (OMB)

Clean Interfaces: In evaluating foreign proposals for participation, proposals with clear technical and managerial interfaces will be essential. Discrete elements lend themselves much more easily to clear, unambiguous divisions of responsibility, funding and management. Obvious examples of clean interfaces in the past are Spacelab and the Canadarm where ESA and Canada, respectively, maintained full responsibility for the development and production of their contribution. From the U.S. side, information exchange was largely limited to interface data to ensure that the foreign system worked with the Shuttle. In addition to simplifying management of the program, this approach also helps prevent adverse technology transfer. (Real private sector investment in the Space Station, which is desirable, may result in U.S. industry-to-foreign industry relationships which may have more complex interfaces; these private sector relationships will be subject to appropriate licensing under the ITAR and other appropriate laws and regulations.)

Technology Transfer: National security concerns regarding technology transfer will be considered at all times. Furthermore, protection of intellectual property is a prime requirement if we are to stimulate private sector investment and involvement in this program over the long term. Potential foreign partners are as interested as we are in protecting their know-how.

National Security Involvement: Foreign concern about potential military involvement in the Space Station is strong. In response to questions about military involvement during his trip, Mr. Beggs used the following line of explanation:

DOD worked with NASA in the early planning for Space Station. They reviewed their near- and long-term plans, but concluded they had no unique requirements that could be satisfied by a manned Space Station. NASA, therefore, constructed its proposal to the President on the basis of civil and commercial requirements. The President approved a civil Space Station to be funded entirely out of NASA's budget, with no national security funds to be used. Of course, like the Shuttle, the Space Station will be available for users. If there are any national security uses, they will be considered on a case-by-case basis. Like national and international

uses, national security uses will be consistent with national policy and international obligations. If, at some time in the future, DOD were to decide they wanted their own Space Station NASA's work and development information would be available to them. That is a statutory requirement upon NASA.

Future use of Space Station capabilities in support of national security uses will not be precluded in any agreements.

Program Management: NASA will retain overall responsibility for execution of the U.S. core program and for integration of the foreign elements with the U.S. station. Management of the development and upkeep of systems being contributed from abroad will be the responsibility of the foreign partners. Ability of potential foreign partners to meet U.S. requirement regarding performance and schedule will be carefully considered and U.S. requirements in these areas will be clearly spelled out in the negotiated agreements. Furthermore, negotiated agreements will make it clear that foreign partners are committed to producing their piece, not just to spending a certain amount of money.

Involvement of Foreign Industry: Cooperative programs covering foreign Space Station developments will be negotiated on an agency-to-agency/government-to-government basis. Involvement of foreign industry in foreign government activities will be the responsibility of and at the discretion of the foreign partners. With respect to multi-national industrial teaming with U.S. Space Station contractors, any transfers of technology necessitated by such arrangements will be handled in the normal Munitions Control process. Regarding the utilization of the Space Station, the U.S. will deal directly with foreign users on the same basis as other users, consistent with current policy regarding the use of other U.S. space systems (NSDD-50).

Involvement of U.S. Industry: At the same time that NASA implements the President's directive for international participation in the program, NASA is committed to making opportunities for participation in the Space Station available to the U.S. private sector. To help achieve this objective, NASA will involve the U.S. private sector in the earliest stages of Space Station planning. The intent is to encourage U.S. private sector participation in the Space Station consistent with the U.S. policy of encouraging greater private sector investment and involvement in commercial space activities. In all cases, foreign policy objectives in the Space Station program will be balanced with domestic interests.

Implementation

Implementation will be consistent with the National Space Strategy (NSDD-___) and other relevant NSDD's. The first step in ensuring the desired response to the President's commitment to an international Space Station is to attain political endorsement for international participation in the project at the London Economic Summit. That subject is covered in the next section.

The next step is to involve potential foreign partners and the U.S. private sector in NASA's planning process. This will allow them to develop the best proposals for their participation. Their impact on the planning will, of course, be commensurate with the seriousness of their commitment and the magnitude of their contribution.

[NASA recognizes that it is fully responsible for protecting against adverse technology transfer in the conduct of its programs. In discharging this responsibility, NASA will follow laws, regulations and policy guidelines for protecting against adverse technology transfer. Furthermore, NASA will undertake to consult on a timely basis with other agencies expert in this area, including DOD, DCI, DOC and DOS regarding the technology transfer aspects of collaborative programs under consideration. SIG(Space) will review as necessary policy issues which might arise in these consultations.](NASA)

[The Senior Interagency Group on the Transfer of Strategic Technology (SIG(TT)) will be the responsible interagency body to protect against unwarranted technology transfer. The SIG(TT) will be responsible for resolving all technology transfer issues and will review proposals for international cooperation prior to USG decision on commitment. The SIG(TT) will ensure that supporting studies and analyses will be conducted by the appropriate agencies and the processes available to this government to protect the unwarranted transfer of technology will be fully utilized to include the Export Control and Munitions Control processes, the use of relevant portions of DOD's Militarily Critical Technologies List, and as provided in other laws and regulations. Furthermore, protection of intellectual property is a prime requirement if we are to stimulate private sector investment and involvement in this program over the long term. As a first step, the SIG(TT) will conduct an evaluation and make recommendations to the NSC on the adequacy of existing mechanisms and the need for further interagency process to ensure proper technology sharing while preventing unwarranted technology transfer.](DCI)*

NASA will evaluate foreign technical proposals in light of the above policy guidelines and will negotiate international

* actually all agencies but NASA

agreements so as to maximize realization of the above objectives for international participation. At every step of the way, NASA will consult on a timely basis with DOD, DCI. DOS, DOC, DOT and other interested agencies. The Sig(Space) will review the status if international participation on the Space Station program as necessary. In particular, before signing agreements with potential partners, NASA will prepare an assessment of proposed International Agreements for review by SIG(Space); this assessment will examine the satisfaction of the above objectives for international participation in the Space Station program.

London Economic Summit - Action

A Summit declaration regarding the international nature of the Space Station project would be a highly visible demonstration of U.S. space leadership and would underscore the unifying effects of high technology cooperation in the alliance. The President has, in fact, personally endorsed a Summit initiative in this area.

1. Based on consultations with foreign officials during Mr. Beggs' visits, it appears probable that all Summit partners will be able, at a minimum, to endorse the language placed on the table by the U.S. Sherpa prior to Beggs' trip. (The U.S. Sherpa has proposed that the Summit partners should "agree in principle to cooperate in the development of an international Space Station, demonstrating that free nations will continue to use outer space for peaceful purposes and for the benefit of all mankind.") Political decisions to cooperate with the U.S. on the Space Station project appear to have been made in all countries visited, but internal consensus building concerning the details of participation is at various stages in the different countries. In this connection, numerous foreign technical agency officials made it clear to Mr. Beggs' delegation that a political statement at the Summit would be a critical element in generating specific foreign proposals at the early date required by NASA for effective Space Station program planning.

Recommendation: In the Summit planning meetings remaining, the U.S. Sherpa and other USG representatives as appropriate should work to extract the most committing Summit declaration language possible from potential Space Station partners.

2. To achieve the best possible arrangements for each international cooperative project, negotiations should be carried out independently from one another. Thus, it is important that the Space Station initiative at the Summit not become enmeshed in any Summit follow-on mechanism that will give potential partners negotiating leverage. To demonstrate

continuing high level U.S. interest in internationalizing the Space Station and to maintain political pressures for large scale foreign involvement, however, a requirement for a report on activities in this area at the following (1985) Summit would be desirable.

Recommendation: The U.S. Sherpa should propose that the U.S. will take the lead in preparing a report to the 1985 Economic Summit regarding the progress of international arrangements for the Space Station program.

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ATTACHMENT I

Key Foreign Officials Met by Mr. Beggs

-- United Kingdom (Prime Minister Thatcher and Foreign Secretary Howe were tied up in meetings with French President Mitterrand outside of London)

1. Kenneth Baker, Minister of State for Industry and Information Technology,

2. Ray Whitney, Parliamentary Under Secretary for Foreign Affairs Office, and

3. Dr. Robin Nicholson, Scientific Advisor to the Cabinet and Thatcher's personal representative.

-- Germany (Chancellor Kohl and Foreign Minister Genscher were out of the country)

1. Heinz Riesenhuber, Minister of Research and Technology,

2. Hans-Werner Lautenschlager, Foreign Ministry Under Secretary,

3. Reimar Luest, Director General-Designate of ESA and current head of the Max Planck Institutes, and

4. Hans Tietmeyer, State Secretary of the Ministry of Finance and the German Summit Sherpa.

-- Italy

1. Prime Minister Craxi,

2. Luigi Granelli, Minister of Scientific Research,

3. Minister Briganta-Colonna, Ministry of Foreign Affairs (representing Italian Summit Sherpa),

4. CNR President Quagliariello, and

5. CNR/PSN Director Guerriero.

-- France

1. President Mitterrand,

2. Foreign Minister Claude Cheysson,

3. French Summit Sherpa Attali,

4. Laurent Fabius, Minister of Industry and Research, and

5. CNES President Hubert Curien.

-- European Space Agency

1. Erik Quistgaard, ESA Director General,

2. Hubert Curien, ESA Council Chairman, and

3. ESA Council Delegates.

-- Japan

1. Prime Minister Nakasone,

2. Foreign Minister Abe,

3. Science Minister Isurugi,

4. LDP Diet members from Space Development Committee

5. The Keidanren (Federation of Japanese Economic Organizations).

-- Canada

1. Science and Technology Minister Donald Johnston,

2. Dr. Louis Berlinquet, Science Advisor to the Cabinet,

3. Marcel Masse, Deputy Secretary of State for External Affairs,

4. Donald Campbell, Director General, Energy, Transport and Science Bureau, Department of External Affairs,

5. Minister of Communications Francis Fox, and

6. Interdepartmental Committee on Space.

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ATTACHMENT II

Key Foreign Reactions

-- United Kingdom

1. Interested, but noncommittal, in bilateral meetings; however,

2. Subsequent statement by UK delegate at ESA showed firm interest in participating in a European approach.

-- Germany

1. Clearly interested and ready to begin negotiations,

2. Major German participation expected, and

3. Political commitment imminent.

-- Italy

1. Political commitment to participate has been made,

2. Strong Italian participation will occur both through ESA and bilaterally (e.g., maintenance of U.S.-Italian Tether program).

-- France

1. Clearly interested in cooperation in Space Station,

2. Mitterrand noted that his proposal for a European Space Station generated little or no European support, and

3. Ready to proceed with negotiations.

-- European Space Agency

1. Much interest in cooperation,

2. Delegates from ESA countries not visited by Beggs indicated broad interest in cooperation with U.S. on Space Station through ESA, and

3. ESA will play a pivotal role in European cooperation.

-- Japan

1. In private conversations, the Prime Minister and Science Minister made it clear that Japan will participate in a meaningful way.

2. In the short term, while consensus is being developed, public statements will remain low key.

-- Canada

1. No commitment to cooperate could be made, since Prime Minister Trudeau has announced he will step down, and the country is in the midst of an active electoral campaign,

2. However, Canada's S&T establishment is extremely enthusiastic and announced that it would spend $2.4 million (Canadian dollars) over the next year on Space Station planning activities, and

3. Representatives of Space Science and Applications felt assured that U.S. priorities included strong emphasis on Science and Applications in addition to Space Station.

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ATTACHMENT III

Examples of Foreign Interests

ESA:

-- Spacelab-derived elements

-- Eureca (ESA's free-flying, Shuttle-deployed platform) or other European space project-derived elements

-- New areas such as solar arrays, OTV hanger, and orbital propulsion system based on Galileo retropropulsion module

France:

-- Potential development of a small manned vehicle (Hermes) to serve as a life boat

-- Development of polar platform for earth remote sensing applications

Germany-Italy:

-- Modified Spacelab for Space Station applications, such as a Materials Processing or Life Sciences Lab

Italy:

-- Modified Tethered Satellite system for Space Station applications

Canada:

-- RMS-related developments for remote handling applications on the Space Station

Japan:

-- Solar collector to provide solar energy for the Space Station
-- Small general purpose platform (astronomy observations, for example)
-- Materials Processing Lab
-- Life Science Lab
-- Energetics, Environmental, Materials Processing, Solar Terrestrial Laboratory

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