
Headquarters Action Tracking System (HATS)
CORRESPONDENCE INFORMATION ONLY

L/1999-00398

Title: Stehmer/Commercialization of the Space Station Report to Congress

NASA

Recip/Originator:

Ext Author/Recip: Sensenbrenner,Rohrabacher,Gordon,McCain,Hollings,Frist,Breaux,Brown,Bond,Mikulski,Walsh,Mollahan

Organization: House and Senate

Date Written: 05/14/1999

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Abstract:

Mr. Goldin transmits report to the committees in response to Section 101 of the Commercial Space Act of 1998: Commercialization of Space Station.

Comments:

Enclosures: 4 enclosures

Related Records: A/1999-00669

Keywords: P.L. 105-303,commercialization,station

File Plan: 1320.299

Analyst: JMassey

05/18/1999 02:35 PM

Page 1 of 1



National
Aeronautics and
Space
Administration

Action Document Summary

1. CONCURRENCES

CODE	SIGNATURE	DATE		CODE	SIGNATURE	DATE	
		IN	OUT			IN	OUT
L			5/7/99				
B	See Attached Peterson concurred w/comments		3/8				
G	See Attached Frankle concurred		3/9				
I	See Attached Schumacher concurred w/comments		3/17				
M	See Attached Rothenberg concurred w/comments		3/16				
U	See Attached Nicogossian concurred		3/12				
Z	See Attached Garver concurred						
Y	See Attached Asner concurred		5/12				
AI			5/14		MAY 14 1999		

Original Pre-
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2. ACTION OFFICER Barbara Bernstein	2a. TYPIST LaDonna Ghee	2b. CODE L	2c. TELEPHONE NUMBER (202) 358-1055
3. QUALITY CHECK Donna Graham	3a. TELEPHONE NUMBER (202) 358-1948	4. ADMINISTRATOR'S CONTROL NUMBER A/1999-00669	5. DUE DATE

6. SUBJECT
Commercialization of Space Station Report

VC 5/12 VC 5/14
VC 5/13

7. SUMMARY
Mr. Goldin transmits this report to Congress in response to Section 101 of the Commercial Space Act of 1998: Commercialization of Space Station.

Cleared by OMB by e-mail D. Camstock 4/13/99.

8. SPECIAL INSTRUCTIONS (This section to be used for any information that is not routine to the processing of the "A" package)

PLEASE PROVIDE COMMENTS AND/OR CONCURRENCE BY NOON, TUESDAY, MARCH 9, 1999.

National Aeronautics and
Space Administration
Office of the Administrator
Washington, DC 20546-0001



MAY 14 1999

The Honorable F. James Sensenbrenner, Jr.
Chairman
Committee on Science
House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The international space industry has matured to the point where the Federal Government is no longer the dominant customer. The private sector is emerging as the dominant buyer of space-related products and services. In 1997, worldwide space revenues reached a value of \$77 billion, with 53 percent of the market in the commercial arena: future projections suggest a continuing shift in the market composition. The private market for satellite telecommunications services has grown to global proportions. The field of remote sensing has expanded well beyond meteorological and national security applications, to include potential new businesses in agriculture, geological surveying, transportation, and vector-borne disease control. The first biotechnology products in the field of structure-based drug design, after a decade of research afforded by Space Shuttle flights, may soon find their way to mass markets. There is little doubt the 21st century will be an age of opportunity for space entrepreneurs. NASA is proud of its contributions over the last four decades that have helped establish the base for this new economic sector.

The Commercial Space Act of 1998 (P.L. 105-303) represents an important step in our Nation's continuing economic development of space. P.L. 105-303 is visionary in its scope, and timely in its recognition of the key role of the International Space Station (ISS) in facilitating the expansion of the market for space products and services. Section 101 of P.L. 105-303 addresses the "Commercialization of Space Station," calling for a series of reports from NASA. In response to the direction in Section 101, transmitted herewith are the following:

- Report concerning Opportunities for Commercial Providers on the International Space Station, as called for in Section 101(1) of P.L. 105-303 (Enclosure 1);
- Status Report on NASA-Sponsored Independent Market Study of Commercial Interest in Use of International Space Station, as called for in Section 101(2) of P.L. 105-303 (Enclosure 2); and.

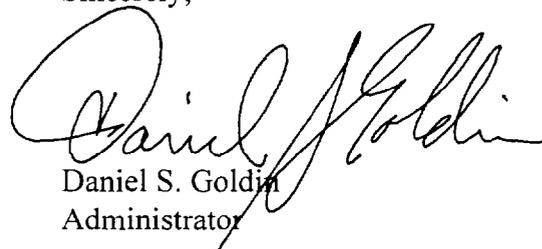
- Report on Commercial Proposals concerning Operation, Servicing, Utilization or Augmentation of the International Space Station, as called for in Section 101(3) of P.L. 105-303 (Enclosure 3).

I am pleased to submit these reports on NASA's progress toward the objectives outlined in Section 101 of P.L. 105-303. As the ISS flight program proceeds, the ISS will become the nucleus of human activity in low-Earth orbit and an unprecedented stimulus for economic growth. NASA is enthusiastic about the prospects for this growth. In preparing for this new era in human space operations, our scientists, engineers and related professional staff have carefully evaluated the Agency's position with respect to the economic conditions and produced the enclosed *Commercial Development Plan for the International Space Station* (Enclosure 4), which has been previously provided to Committee staff. We believe the initiatives outlined in this Plan represent prudent and pragmatic steps that will allow us to declare unequivocally that the ISS as "open for business," and ensure that the ISS fulfills its mission in facilitating economic development.

As we proceed in planning for the commercialization of the ISS, we must acknowledge that the ISS is a facility with multiple international partners, who will be both collaborators in scientific research as well as potential competitors with regard to commercial activities. As such, NASA will assess its policies and plans to ensure a coordinated approach that is conducive to both the cooperative and the competitive aspects of ISS operations.

I would be pleased to discuss these reports with you in greater detail, if you wish.

Sincerely,



Daniel S. Goldin
Administrator

4 Enclosures

**NASA Report
on
Opportunities for Commercial Providers
on the
International Space Station**

Section 101(1) of the Commercial Space Act of 1998 (P.L. 105-303) calls for the following Report (1):

- “The Administrator shall deliver ... a study that identifies and examines—*
- (A) the opportunities for commercial providers to play a role in International Space Station activities, including operation, use, servicing, and augmentation;*
 - (B) the potential cost savings to be derived from commercial providers playing a role in each of these activities;*
 - (C) which of the opportunities described in subparagraph (A) the Administrator plans to make available to commercial providers in fiscal years 1999 and 2000;*
 - (D) the specific policies and initiatives the Administrator is advancing to encourage and facilitate these commercial opportunities; and*
 - (E) the revenues and cost reimbursements to the Federal Government from commercial users of the Space Station.”*

Opportunities for Commercial Providers

In October 1998, NASA completed an internal study on “Potential Pathfinder Areas for Commercial Development of the ISS.”¹ The study concluded that there are commercial opportunities across the entire scope of the ISS program: (a) utilization of station assets in pursuit of commercially-sponsored research & development; (b) commercial operation and servicing of various elements of ISS ground and flight infrastructure; and (c) development of new capabilities to augment the existing Station elements and distributed systems. A representative set of opportunities was identified in each of the major areas and a feasibility assessment was performed based on typical business criteria, such as market size, risk and capitalization requirements, as well as barriers to market entry.

Based on the internal study, NASA has elected to pursue a “pathfinder” strategy to identify private companies with the capabilities and interest needed to pursue these, or other, opportunities. In addition, NASA is encouraging formal offers from the private sector involving all aspects of ISS-related commerce. In several cases, companies have already come forward to informally discuss their business concepts, and NASA intends to proceed with negotiations as these ventures are formally proposed.

Discussion of Terms

¹ Attachment I to the *Commercial Development Plan for the International Space Station*, 16 November 1998 (copy enclosed).

NASA will continue to undertake informal discussions with private companies to assist in their development of business ventures. In the course of these discussions it will be useful to distinguish between “unsolicited proposals” and entrepreneurial “offers,” since the former term has a highly specific meaning which would limit the range of potential economic development activities. An “unsolicited proposal” is defined in FAR Subpart 15.601 as,

“...a written proposal for a new or innovative idea that is submitted to an agency on the initiative of the offeror for the purpose of obtaining a contract with the Government, and that is not in response to a request for proposals.”

Although NASA will continue to be receptive to unsolicited proposals, we believe the Congressional vision for economic development entails far more than the provision of further government contracts. For this reason we extend the scope to include entrepreneurial “offers” and propose to define these as,

“...a written offer for a new or innovative idea, involving ISS assets, that is submitted to NASA on the initiative of the offeror for the purpose of creating value-added products or services for sale in private markets, and that is not in response to a request for proposals.”

It is also important to note the importance of a *formal written* transmittal in either case. Due to the wide range of informal discussions that accompany business concept development, it will be useful to distinguish between formal written offers, or proposals, and informal exchanges of information. It is our intent to begin registering all incoming formal written offers, or proposals, in order to accurately report on our progress toward commercial development of the ISS.

With these considerations in mind, NASA looks forward with great interest to receiving formal written offers involving commerce on the ISS, while continuing to process unsolicited proposals in accordance with established government practices.

Potential Cost Savings, Revenues and Reimbursements

It is not possible to identify potential cost savings, revenues, or reimbursements without specific formal commercial offers in hand with which to perform a credible life cycle cost analysis. Although several concepts have been informally discussed, we must proceed with negotiation of the terms of agreement in order to elicit specificity in the products to be provided, or services performed, and associated prices. In order to ensure the expected and potential Government cost savings, revenues, or reimbursements are clearly identified, we will prepare a *Comparative Life-Cycle Cost Statement*, in conjunction with offerors for all applicable future agreements. The fidelity of the statements will vary with the magnitude of the offers, and NASA will seek to avoid burdensome analysis requirements to the process that could serve as a disincentive, or barrier, to commercial development. We will be pleased to provide these statements to the Committee as they are developed.

It is important to note that not all formal commercial offers will include identifiable cost savings to the NASA budget, particularly in the near term. For instance, a U.S. company might propose using the ISS as an orbital platform for a business whose customer base does not include the U.S. Government. Alternatively, a commercial entity might develop an improvement, which is beyond the current ISS program baseline, and offer the services to NASA, as well as other ISS users. In such a case there could be a cost avoidance, but not necessarily cost savings. There are other benefits that NASA may consider beyond cost savings, such as redundant capabilities provided by one or more commercial provider that could add robustness to station operations or servicing.

As the ISS grows in scope and the commercial development plan evolves, NASA is optimistic that revenues and cost reimbursement opportunities, as well as commercial competition that will drive prices down, will begin to emerge; however, the magnitude of the value and the timing remain unclear at this early stage. We believe it is most critical, at the present time, to strategically position both the ISS program and NASA to act as the catalyst for future growth in private endeavors by removing barriers, creating opportunities, and entering into private-public partnerships. In the years to come, this growth may yield the key to human exploration and development of space.

Availability of Commercial Opportunities in FY 1999 and FY 2000

NASA finds no reason to defer the availability of commercial opportunities; therefore, it is our intent to enter into negotiations as soon as commercial pathfinders are formally offered. NASA is not restricting commercial opportunities to any predetermined category, and will let the market determine which offers are tendered. At this time, based on informal discussions with potential sources, we project receipt of approximately six pathfinder offers from industry in the third quarter of FY 1999. NASA is developing a standard process for disposition of formal commercial offers, as part of our ISO 9000 certification activities. This process will include monitoring and tracking of metrics on offers projected, received, and closed. Following offer receipt, a period of due diligence will be required in order to develop the detailed data and information necessary to thoroughly qualify and close on agreements. We are working to minimize the length of time to conduct this process, and will develop an approach responsive to industry needs. Not all offers may reach this stage; those that are successful will be publicly announced, when the private companies are ready, while protecting proprietary data as required and agreed upon.

Policies and Initiatives

NASA policy is to encourage economic development in low-Earth orbit using the ISS as a proving ground. NASA's *Commercial Development Plan for the International Space Station* identifies a series of initiatives to this end. Most notable among these include:

- Independent Cost Assessments: A clearly articulated pricing policy has long been viewed as a necessary prerequisite to commercial development. In order to develop such a policy, Government costs must first be thoroughly characterized and then used as the basis for a pricing structure. NASA has initiated external independent studies, by a recognized accounting practice, to review marginal and average costs both retrospectively for the Shuttle program and prospectively for the ISS program. This review, in combination with recommendations from the independent accountant on approaches to value and cost-based pricing strategies, will help form the basis for the Administration to develop an *ISS Pricing Policy*. Due to the range of Government-furnished services and equipment associated with potential use of the ISS, we anticipate the bundling of services (*e.g.*, power, volume, crew time, *etc.*) in the short run. In the long run, as commercial providers emerge in niche areas, we expect to transition toward unbundled services to maximize the presence of competitive markets.
- Pricing Authority: In the near-term, NASA is exploring with its various stakeholders the possibility of obtaining pricing authority and establishing a price structure that would allow the Agency to enter into early agreements with the private sector.
- Intellectual Property Review: Although extensive policies and procedures are already in place to enforce proprietary restrictions and protect intellectual property, there is a persistent perception in the private sector that trade secrets and associated market-sensitive information are at risk when working with the Federal Government. In order to overcome this potential barrier, NASA's Office of General Counsel is conducting a thorough review and consolidating a *Reference Guide* on current NASA practices that will document procedures for protection, as well as remedies for recourse. In addition, NASA will establish closed negotiating teams to deal with incoming formal commercial offers in order to heighten sensitivity and ensure confidentiality.
- Streamlined Pathfinder Process: In accordance with NASA's overall initiative to obtain ISO 9000 certification, we are preparing an *Organizational Work Instruction* to specifically address the handling of formal commercial offers.² This new process will add discipline and emphasize accountability in the treatment of candidate business offers. It is NASA's goal to create a fully auditable account of the receipt, evaluation and final dispositioning for all technically valid offers. In cases that do not result in an agreement, we will carefully document the reasons and rationale.
- Non-Government Organization: NASA is examining the possibility of creating a non-government organization (NGO) to manage ISS utilization and commercial development in the future. This proven pathway may represent the most effective method of internalizing both scientific excellence and business acumen in the

² *ibid* (2), attachment 2. (copy enclosed).

research and technology program for the ISS. In support of this objective, NASA has enlisted the help of the National Research Council to evaluate institutional arrangements for managing ISS research and development. Contracted through the Space Studies Board, this effort will also include cooperation with the Aeronautics and Space Engineering Board, and the Science, Technology and Economic Policy Board. A preliminary Reference Model for an NGO has already been drafted.³

Top-Level Executive Leadership: Finally, the position of *Special Assistant to the Administrator for Commercialization* has been established in order to ensure the highest level of visibility on the Agency agenda. This executive will be charged to work across all field Centers and programs in the pursuit of entrepreneurial innovation. In complement, the Human Exploration and Development of Space (HEDS) enterprise has established a new *Space Station Utilization and Economic Development Division* which reports jointly to both the Office of Life and Microgravity Sciences and Applications and the Office of Space Flight, to serve as the focal point for implementation of the ISS components. Guidance is also provided by those committees of the NASA Advisory Council which include various aspects of commercial development in their purview.

³ *ibid* (2), attachment 3. (copy enclosed).

These are the major initiatives that NASA has already set in motion. Supporting tactics are also underway and completed in several cases. These are discussed at greater detail in NASA's *Commercial Development Plan for the International Space Station* (provided as Enclosure 4 to this letter).

**NASA Status Report
on
Independent Market Study
concerning
Commercial Interest in Use of International Space Station**

PL 105-303, Sec.101, paragraph (b) calls for the following Report (2):

“The Administrator shall deliver... an independently conducted market study that evaluates and examines potential industry interest in providing commercial goods and services for the operation, servicing and augmentation of the International Space Station, and in the commercial use of the International Space Station. This study shall also include updates to the cost savings and revenue estimates made in the study described in paragraph (1) based on the external market assessment.”

Consistent with the requirements of the Act, NASA has commissioned an independently conducted market study through the professional services of the KPMG Peat Marwick Space and High Technology Practice. Initiated in December 1998, this study is planned for completion in the April 1999 timeframe. It will enlist the support of aerospace and non-aerospace executives in an evaluation of the potential commercial opportunities afforded by the ISS. The potential for Government revenues and cost reimbursements will also be addressed. In addition, we have requested the study to carefully consider our pathfinder approach and identify a strategic set of specific business ventures with concomitant private sponsors.

The participants have been identified and discussions are well underway. NASA looks forward with great interest to the results of the study, as well as an independent appraisal of our own internal study and initiatives. We fully intend to update our plans, wherever feasible, in response to the recommendations which arise from this important activity.

We will submit this report to the Committee upon its review and completion.

National Aeronautics and
Space Administration

Headquarters

Washington, DC 20546-0001



NOV 12 1998

Reply to Attn of

M-4

TO: Distribution

FROM: M/Associate Administrator for Space Flight

SUBJECT: Tracking, Reporting and Dispositioning International Space
Station (ISS) Unsolicited Proposals

The Commercial Space Act of 1998, Public Law 105-303, was signed into law by the President on October 28, 1998. This law provides additional impetus for NASA to pursue and enable commercial development of the ISS. Included in the law is a requirement to report to Congress the level of current commercial involvement in the ISS. The specific request is shown below:

Title 1, Section 101, (b)(3) "The Administrator shall deliver to the Congress, no later than the submission of the President's annual budget request for fiscal year 2000 [February 1999], a report detailing how many proposals (whether solicited or not) the National Aeronautics and Space Administration received during calendar years 1997 and 1998 regarding commercial operation, servicing, utilization, or augmentation of the International Space Station, broken down by each of these four categories, and specifying how many agreements the National Aeronautics and Space Administration has entered into in response to these proposals, also broken down by these four categories."

While it is important to gather this information in an accurate and timely manner, it is equally important to protect the proprietary nature of these proposals. Therefore, I am asking that the information for all proposals, which either directly address the ISS or in any way impinge on its use, operations, servicing or augmentation, be forwarded to Headquarters only as statistics without reference to either the company names or their concepts.

To ensure uniformity in the use of the term "Unsolicited Proposal," I ask you to use the definition in the NASA Handbook "Guidance for the Preparation and Submission of Unsolicited Proposals." This definition excludes all informal discussions which failed to produce a proposal with all of the data necessary for NASA to act on. All unsolicited proposals meeting these criteria should be included in your reports. For informational purposes only, please also list any

other written proposals which may not meet the above criteria but may nonetheless indicate a commercial interest in the ISS.

The requested proposal data should be divided into not only the four categories requested, but subdivided by solicited and unsolicited. The first of these reports should separately identify the statistics at your Center for the calendar year 1997 and the first 10 months of calendar year 1997 and the first 10 months of calendar year 1998.

The first round of information should be sent to Mr. Mark Uhran at NASA Headquarters, Office of Life and Microgravity Sciences and Applications, Code US, by November 30, 1998. An update of this information for the remainder of calendar year 1998 should be submitted to him by January 11, 1999, in order to meet the congressional deadline. Any further assumptions in the selection or classification of these proposals and the agreements resulting from the proposals should be noted in your reports. Please identify a point-of-contact with your submittal in the event follow-up action is required.

If you have any questions concerning this request or its implementation, please call Mr. Uhran at (202) 358-2233.



Joseph H. Rothenberg

Distribution:

R/Gen. Armstrong
S/Dr. Weiler (Acting)
U/Dr. Nicogossian
Y/Dr. Asrar
ARC/200.1/Dr. McDonald
DFRC/D-2014/Mr. Petersen
GSFC/100/Mr. Diaz
JSC/AA/Mr. Abbey -
KSC/AA/Mr. Bridges
LaRC/A/Dr. Creedon
LeRC/0100/Mr. Campbell
MSFC/DA01/Mr. Stephenson
SSC/AA00/Mr. Estess

Director, Jet Propulsion Laboratory
JPL/180-904/Dr. Stone

National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



NOV 30 1998

Reply to Attn of:

DA01

TO: NASA Headquarters
Attn: M/Joseph H. Rothenberg

FROM: DA01/A. G. Stephenson

SUBJECT: Tracking, Reporting and Dispositioning International Space Station (ISS)
Unsolicited Proposals

This letter is in response to your memorandum, subject as above, dated November 12, 1998, requesting information on receipt of proposals regarding commercial operation, servicing, utilization, or augmentation of the ISS.

In gathering the requested information, we have excluded consideration of contract change proposals that emanate from ISS utilization activities with The Boeing Company. Also excluded from consideration are any proposals related to Cooperative Agreements with Commercial Space Centers under the purview of the MSFC Microgravity Research Program Office. These exclusions have been discussed with Mr. Mark Uhan.

With the noted exclusions, any proposals received at this Center which might impinge on ISS operations, servicing, utilization, or augmentation would be unsolicited. In the period of interest, calendar year 1997 and the first 10 months of 1998, we received a significant number of unsolicited proposals that meet the definition in the NASA Handbook, "Guidance for the Preparation and Submission of Unsolicited Proposals." The great majority of these proposals were submitted by universities or other noncommercial organizations. Those that were submitted by commercial interests have been reviewed, and we have not identified any that fall within the prescribed categories.

Additionally, we have not identified any written submissions not meeting the Handbook criteria that fall within the prescribed categories.

Any proposals received during the remainder of this calendar year will be reviewed, and a follow-up report will be provided by January 11, 1999.

A. G. Stephenson
for A. G. Stephenson
Director

cc:
HQ/US/Mr. Ufran

National Aeronautics and
Space Administration
Dryden Flight Research Center
P.O. Box 273
Edwards, CA 93523-0273



Reply to Attn. of: A

NOV 30 1998

TO: NASA Headquarters
Attn: US/Mr. Mark Uhran

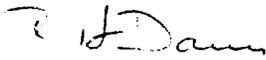
FROM: A/Chief, Acquisition Management Office

SUBJECT: Tracking, Reporting, and Dispositioning International Space Station (ISS)
Unsolicited Proposals

REF: Your letter, dated November 12, 1998, subject as above

Dryden Flight Research Center did not receive any proposals during calendar years 1997 and 1998 relating to the International Space Station.

Questions on this matter may be referred to the undersigned at (805) 258-3326.


R. H. Davis

National Aeronautics and
Space Administration
Lewis Research Center
Cleveland, OH 44135-3191



DEC 0 1998

Reply to Attn of: 6000

TO: NASA Headquarters
Attn: US/Office of Life and Microgravity Sciences
and Applications

FROM: 6000/Director of Space

Subject: International Space Station (ISS) Unsolicited
Proposals

Per the November 12, 1998 request from Mr. Joseph Rothenberg, I have requested information from our Space Directorate regarding their receipt of any unsolicited/solicited proposals regarding commercial operation, servicing, utilization, or augmentation of the ISS. During the calendar year 1997 and to date this year, the Lewis Research Center (LeRC) has received no proposals of this nature. We are working with the Center for Commercial Applications of Combustion in Space to accommodate some of their proposed experiments in the LeRC developed ISS Fluids and Combustion Facility. Those requests, however, are coming through the Microgravity Research Program Office at the Marshall Space Flight Center and not directly to LeRC. I will submit any updates of this information for the remainder of the calendar year to you by January 11, 1999.

If you have any questions or require any follow-up action, please call Mr. Jack Salzman at NASA LeRC at (216) 433-2868.

A handwritten signature in cursive script that reads "Gerald J. Barna".

Gerald J. Barna

cc:
HQ/M/J. Rothenberg
0100/D. Campbell
6000/G. Barna
6700/J. Salzman

Headquarters

Washington, DC 20546-0001



DEC - 8 1998

Reply to Attn of:

SR

SR

TO: ^{US}
~~SC~~/Mark Uhlan

FROM: SR/W. Vernon Jones

SUBJECT: Tracking, Reporting and Dispositioning International Space Station (ISS)
Unsolicited Proposals

In response to the November 12, 1998, request from the Associate Administrator for Space Flight, we have reviewed the Code S records to determine whether or not we have received any proposals for commercial operation, servicing, utilization, or augmentation of the International Space Station (ISS) in 1997 or 1998. The records show that we have not received any proposal that fits these criteria. Informal inquiries regarding commercial or engineering applications are routinely referred to Mr. Carlos Parra at the Johnson Space Center, the lead for use of the ISS for Engineering Applications.

A Code S Announcement of Opportunity (AO) released May 12, 1997 for the Small Explorer Program and Missions of Opportunity resulted in six scientific research proposals for participation in the European Space Agency investigations utilizing the Express Pallet. These proposals were evaluated in accordance with the AO guidelines, and none was selected.

W. Vernon Jones (wvjones@hq.nasa.gov; 202-358-0885) is the Office of Space Science point of contact for utilization of the ISS. Questions regarding commercial or engineering applications by Code S may be addressed to Dana Brewer at 202-358-1678.

A handwritten signature in cursive script, appearing to read "W. Vernon Jones".

Senior Science Program Executive
Research Program Management Division

Ames Research Center
Moffett Field, CA 94035-1000



Reply to Attn of

S:244-19

DEC 14 1998

TO: NASA Headquarters
Attn: US/Mark Uhran, Associate Administrator for Space Flight

FROM: D/Director

SUBJECT: Request for Information on International Space Station (ISS) Unsolicited Proposals

REF: Letter dated November 12, 1998

This letter is in response to your request for data relative to the receipt of unsolicited proposals for the International Space Station. No proposals of this nature have been received by Ames Research Center for the designated period.

Ames has received proposals for and executed contracts for three (3) Phase III SBIRs for Space Station Utilization.

The point-of-contact for this report at NASA Ames Research Center is Mr. John Givens at (650) 604-5696.

A handwritten signature in black ink, appearing to read "H. McDonald".

Henry McDonald

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001



DEC 18 1998

Reply to Attn of: **RW**

TO: US/Acting Director, Flight Systems Office

FROM: R/Associate Administrator for Aero-Space Technology

SUBJECT: Response to Action;R/1998-00261 – Tracking, Reporting, &
Dispositioning International Space Station Unsolicited Proposals

In response to the requested information, the Office of Aero-Space Technology has received no solicited or unsolicited proposals over the period requested, in any of the described categories. Follow-up action may be forwarded to Carl G. Ray (202) 358-2233.

A handwritten signature in cursive script, reading "Spence M. Armstrong".

Spence M. Armstrong
Associate Administrator for
Aero-Space Technology

National Aeronautics and
Space Administration
Dryden Flight Research Center
P.O. Box 273
Edwards, CA 93523-0273



Reply to Attn. of:

A

JAN 08 1999

TO: NASA Headquarters
Attn: US/Mr. Mark Uhran

FROM: A/Chief, Acquisition Management Office

SUBJECT: Tracking, Reporting, and Dispositioning International Space Station (ISS)
Unsolicited Proposals

REF: Your letter, dated November 12, 1998, subject as above
My letter, dated November 30, 1998, subject as above

Dryden Flight Research Center did not receive any proposals for the remainder of calendar year 1998 relating to the International Space Station.

Questions on this matter may be referred to the undersigned at (805) 258-3326.

R. H. Davis
R. H. Davis

National Aeronautics and
Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



*Kevin
Plank*

JAN 11 1999

Reply to Attn of DA01

TO: NASA Headquarters
Attn: M/Joseph H. Rothenberg

FROM: DA01/A. G. Stephenson

SUBJECT: Tracking, Reporting and Dispositioning International Space Station (ISS)
Unsolicited Proposals

This letter is a follow-up to our previous response, subject as above, dated November 30, 1998, responding to your request for information on receipt of proposals regarding commercial operation, servicing, utilization, or augmentation of the ISS.

We previously reported no written submissions or unsolicited proposals impinging on ISS operations, servicing, utilization or augmentation for the calendar year of 1997, and the first 10 months of 1998. Our follow-up review for the months of November and December 1998, also revealed no submissions by commercial interests falling within the prescribed categories.

A. G. Stephenson
Director

cc:
HQ/US/Mr. Uhran

ACTION OFFICE: *[Handwritten initials]*
CONTROL NO: *17/1998-10-05-5*
DATE RECEIVED: *1/13/99*
DUE DATE: _____
M _____ M-1 _____
M-2 _____ M-4 _____ M-6 _____ M-7 _____
MB _____ ML _____ MH _____ ME _____
MP _____ MI _____ MF _____
MX _____ MR _____ MO _____
MV _____

National Aeronautics and
Space Administration



Lyndon B. Johnson Space Center
2101 NASA Road 1
Houston, Texas 77058-3696

FEB 08 1999

Reply to Attn of BG-99-30

TO: NASA Headquarters
Attn: M/Associate Administrator for Space Flight

FROM: AA/Director

SUBJECT: Tracking, Reporting and Dispositioning International Space Station
Unsolicited Proposals

This is in response to your letter M-4, dated November 12, 1998. In 1997, the Johnson Space Center (JSC) received two unsolicited proposals; one in the commercial servicing category, and one in the commercial augmentation category. In 1998, JSC received one unsolicited proposal in the commercial utilization category. The 1998 unsolicited proposal resulted in the award of a cooperative agreement.

If you have any questions concerning this information, please contact Mr. Sid Clinton at 281-244-7147.

Original Signed By
GEORGE W. S. ABBEY

George W. S. Abbey

cc:
HQ/M/L. Sirota
HQ/M-4/G. McClain
HQ/ML/W. Hawes
HQ/US/M. Uhran

**NASA Report
on
Commercial Proposals
concerning
Operation, Servicing, Utilization or Augmentation
of the
International Space Station**

PL 105-303, Sec.101, paragraph (b) calls for the following Report (3):

“The Administrator shall deliver... a report detailing how many proposals (whether solicited or not) the National Aeronautics and Space Administration received during calendar years 1997 and 1998 regarding commercial operation, servicing, utilization, or augmentation of the International Space Station, broken down by each of these four categories, and specifying how many agreements the National Aeronautics and Space Administration has entered into in response to these proposals, also broken down by these four categories.”

In accordance with this direction, a memorandum was issued to all affected Headquarters Associate Administrators and Center Directors requesting reports on commercial offers received that were attributable to the ISS.⁴ (There were no solicitations for commercial proposals or offers during this period.) A total of five unsolicited proposals were received, four in 1997 and one in 1998. They are identified as follows:

<u>Category</u>	<u>Number Received</u>	<u>Year</u>	<u>Location Received</u>
Commercial Servicing	1	1997	Johnson Space Center
Commercial Augmentation	1	1997	Johnson Space Center
Commercial Utilization	1	1998	Johnson Space Center
Commercial Utilization	2	1997	Headquarters

All remaining recipients of the request provided a negative reply.⁵

In the area of Commercial Utilization, one cooperative agreement was entered into between the Johnson Space Center and the Texas A&M University. This agreement established a Commercial Space Center (CSC) for Engineering Research and Technology Development. The purpose of this CSC and its affiliates is to investigate the potential for commercial utilization of the ISS as an engineering testbed for prototype technology development and demonstration projects. Of the remaining two proposals, both remain under negotiation with their content protected due to proprietary restrictions.

⁴ Memorandum from Associate Administrator for Space Flight to Distribution entitled, “Tracking, Reporting and Dispositioning International Space Station (ISS) Unsolicited Proposals”, 12 November, 1998 (copy provided in enclosure 2).

⁵ Copies of responding memorandums provided in enclosure 2.

In the area of Commercial Servicing, the proposal was partially accepted and will result in the flight of an Integrated Cargo Carrier (ICC) on space shuttle flight STS-96

In the area of Commercial Augmentation, the proposal was rejected because it would have introduced unnecessary cost and schedule risk to the complex Neurolab mission at a very late stage in mission preparations.

In consideration of the relevance of the CSC program to the direction in Section 101 of P.L. 105-303, NASA's Office of Life and Microgravity Sciences and Applications undertook an evaluation of the number of CSC proposals, all in the category of commercial utilization, accepted and rejected in the subject years. These proposals were not formally solicited, but were developed through established relationships with industry and through strategic outreach activities. This resulted in the high acceptance rate. The results of this evaluation were as follows:

<u>CSC Location</u>	CY 1997		CY 1998	
	Number of Projects <u>Accepted</u>	Number of Projects <u>Rejected</u>	Number of Projects <u>Accepted</u>	Number of Projects <u>Rejected</u>
Golden, CO	8	0	7	0
Boston, MA	9	0	9	1
Madison, WI	4	0	4	0
Birmingham, AL	17	0	17	0
Ann Arbor, MI	3	0	1	2
Boulder, CO	18	3	21	4
Huntsville, AL	17	0	17	0
Houston, TX	16	0	16	0
Auburn, AL	8	8	8	8
New Haven, CT	10	19	10	19
Total	110	30	110	34

These data represent projects proposed by industrial affiliates and included in the annual proposals of the CSCs for renewal of their cooperative agreements. In most cases the basis for project rejection was insufficient funds.

Assessment of the 1997-1998 Commercial Proposals

With the exception of the Government-industry co-funded CSC program, there have been few formal commercial offers received to date related to the ISS. This is not an unexpected result. Most commercial venture discussions, particularly in the categories of operations, services and capability development have been informal and conceptual in nature. Estimating the precise number of such discussions is difficult, since they occur at many levels in the management hierarchy and are not tracked as a routine practice. Now that the ISS program is entering the operational phase, NASA anticipates growth in the volume of formal commercial offers. It is for this reason that NASA is proceeding with a *Commercial Development Plan for the International Space Station* and its core “pathfinder” strategy.

Focusing the commercial development effort at a senior executive level and establishing a clearing house at NASA Headquarters for pathfinder commercial offers will send a clear signal that NASA is prepared to enter into new private sector relationships. We are targeting the obstacles, streamlining the process and breaking down the barriers to market entry. With the ongoing support of the Administration and Congress, together we can clear a path for the economic development of space.