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UNITED STATES GOVERNMENT LICENSING OF COMMERCIAL SPACE ACTIVITIES BY PRIVATE ENTERPRISE

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Abstract

The paper describes the manner in which the United States is meeting its responsibilities under international law and treaty, including the Outer Space Treaty and the International Liability Convention, for national activities in outer space undertaken by means of launch vehicles or payloads launched from U.S. territory or facilities by private commercial enterprises organized or existing under the laws of the United States.

The paper refers to the international legal framework under which the Government of the United States is organizing to discharge its legal responsibility for such activities, and describes the basis in U.S. municipal law for the actions the Government has taken to satisfy its actual or potential obligations (in unsettled areas of law) and to protect U.S. national interests. The paper also reports on the experience of the United States Department of Transportation, the "lead agency" within the Federal Government for licensing launch ranges as well as launches of private commercial launch vehicles and payloads, in managing the regulatory issues presented by the advent of commercial space transportation.

Introduction

I want to thank the International Institute of Space Law (IISL) for allowing me to participate in its 27th Colloquium on the Law of Outer Space and to present, on behalf of the United States Department of Transportation, a paper discussing U.S. Government licensing of space-related activities by private commercial firms. I know this topic is of considerable interest to certain members of the IISL and the International Astronautical Federation (IAF). I hope that these remarks will add to that interest and that they contribute to an increased appreciation of the many and varied issues the U.S. Government confronts in this endeavor.

As most of you know, the United States has sought to encourage legitimate and lawful commercial development of outer space through the provision of launch services by private business firms. This national policy has placed its government in the forefront of those governments challenged with the responsibility of giving practical meaning to the concepts of "authorization and continuing supervision" of, and jurisdiction over, the activities of non-governmental entities as set forth in the 1967 Outer Space Treaty.[1]

Before describing the ways in which the Government is organizing to fulfill its responsibilities in this regard, it might be useful to indicate one of the purposes to which these remarks are directed.

In a paper[2] presented at the 26th IISL Colloquium held last year in Budapest, Dr. V. S. Vereschetin, Deputy Director of the Institute of State and Law of the USSR Academy of Sciences, asserted, in substance, that the absence of specific U.S. statutory authority for regulating private commercial space activities and the nonexistence of a "single state organ, endowed with regulatory functions"[3] rendered the United States in violation of its treaty and other international legal obligations. Dr. Vereschetin wrote that these and related factors

> confirm the conclusion that the present state of domestic regulations of private companies' space activities in the USA fails to correspond to the obligations imposed by Article VI of the Space Treaty, as it leaves for private companies opportunities to violate the provisions of the Space Treaty and of the other norms of international space law.[4]

I take serious exception to this characterization of U.S. law and regulatory policy as applied to private sector space activities. As explained in the sections which follow, all such activities have been and continue to be conducted in strict accordance with regulations issued by a

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1 Articles VI and VIII, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, 27 January 1967, 18 U.S.T. 2410, T.I.A.S. 6347, 610 U.N.T.S. 205 (effective 10 October 1967).

2 V.S. Vereschetin, Space Activities of "Non-Governmental Entities:" Issues of International and Domestic Law; 26th Colloquium on the Law of Outer Space, pp. 260-264 (1983).

3 Id., at p. 264.

4 Id., at p. 264.

number of U.S. Government agencies. The application of these regulations fully ensures that the United States meets its international responsibilities under the Outer Space Treaty and other "norms of international law."

The remarks contained in this paper are intended to provide a factual explanation of how the U.S. Government is approaching the "authorization and continuing supervision" of commercial space activities by private firms and to describe certain proposals for improvements in the licensing process which are now under consideration. They in no way suggest that U.S. law or regulatory policy has at any time been inadequate to fulfill any international responsibilities of the United States in this regard.

Simply stated, the issues of whether U.S. law contains specific authority for regulating private commercial space activities or whether one can point to a centralized governmental licensing authority are largely irrelevant to this discussion. The relevant treaties preserve for each Party signatory thereto the exclusive right to determine how it will meet the responsibilities it has assumed. The treaties also establish the government of each Party as the legal entity against which those sustaining damage as a result of a launch from U.S. territory or facilities must seek recourse in the first instance. Thus, whether U.S. law or regulatory processes give assurance that the Government's exposure to liability for such damage is adequately protected is, under both U.S. law and treaty, a matter for the U.S. Government alone to decide.

Legal and Policy Framework

The approach the United States Government has taken to meeting its legal responsibilities for space-related activities undertaken by the private sector rests upon three central policy objectives. First, the Government seeks to regulate such activities by private individuals or business entities so as to fulfill its responsibilities under treaty or other applicable international law. Second, the Government shall regulate in a manner which protects important national interests of the United States. Fundamentally, these encompass national security, foreign policy and public safety. And third, the Government seeks to regulate only to the extent necessary to meet its obligations in these areas.

Having cited the policies which guide the assertion of Federal interests in private commercial space activities, I should articulate the legal bases for these policies. The authority of the United States to regulate private commercial space transportation is plenary. It arises from two primary sources:

1) Article VI of the Constitution of the United States, which incorporates international treaties into U.S. municipal law; and
2) Article VIII of the Outer Space Treaty, requiring that a state "on whose registry an object launched into space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body."[5]

Equally important are the numerous municipal statutes deemed to apply to various aspects of space vehicle and payload launches. These dictate the manner in which the interests of governmental bodies at all levels are asserted.

These elements comprise the statutory bases for the Government to provide "authorization and continuing supervision" of space activities conducted by private commercial enterprises, consistent with its responsibilities under Article VI of the Outer Space Treaty.[6] Thus, the United States Government has the right and obligation, under both treaty and municipal law, to determine the nature and scope of the authorization and supervision of these activities that it will provide.

Licensing Private Commercial Space Activities

Given the number and diversity of space commercialization efforts now under way, the legal authority of the U.S. Government with respect to private commercial space activities is an issue of immediate and practical interest. Indeed, the Government was forced to address the issues of authorization and continuing supervision in a very direct and immediate way when, in March of 1982, it was presented with the first request by a U.S. firm for authorization to launch a commercial rocket from U.S. soil. This request, by Space Services Incorporated of America (SSI), a Texas corporation, for permission to conduct a suborbital test and demonstration launch of its Conestoga I rocket, precipitated a process which compelled the Government to give more rigorous definition to the amorphous concepts of "authorization and supervision" of private commercial space activities by U.S. nationals. How, precisely, was U.S. jurisdiction to be

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5 Supra note 1.

6 See generally: N.M. Matte, Space Activities and Emerging International Law, (Center for Research of Air and Space Law, McGill University, 1984) pp. 293-309; A. Dula, Authorization and Continuing Supervision of United States Commercial Space Activities, in Private Sector Activities in Outer Space: Emerging Law and Practice (Section of International Law and Practice, American Bar Association, August, 1984), pp. 8-10.

asserted and with what aspects of the launch would the Government specifically concern itself?

Development of Procedures

The request by SSI for permission to launch the Conestoga I brought into sharp focus the Government's substantial domestic and international responsibilities in this area and the question of how they would be met. Essentially, the Government would have to assure itself that the proposed launch would be conducted in such a manner as to present virtually no risk of exposing itself to liability for any damage that might result. Implicit in the question was the notion that, in the absence of such assurances, the Government would have to exercise its legal authority to prevent the launch.

Initial consideration of SSI's application immediately revealed that a number of Federal agencies could claim either direct or indirect regulatory interests in the issues presented by the application. These included matters as diverse as transporting hazardous materials, gaining access to Government radio frequencies, launching through controlled airspace, and even the issuance of a license from the Bureau of Alcohol, Tobacco and Firearms of the Treasury Department for importation of firearms.[7] No agency, however, appeared to have direct responsibility for licensing the actual launch.

Consequently, a decision was made by members of a senior interagency group on space, operating under the aegis of the National Security Council, to rely upon the Department of State's authority under Section 38 of the Arms Export Control Act[8] and the International Traffic in Arms Regulations (ITAR),[9] issued pursuant to that Act, as the umbrella authority under which the Federal Government would discharge its international and municipal legalobligations to authorize and supervise the proposed launch. In essence, a private space launch was to be treated as an "export" of a munition into space and would be regulated under the ITAR. This procedure has been used to issue approvals for two launches to date: SSI's Conestoga launch, which occurred on 9 September 1982, and a launch by Starstruck, Inc., a California corporation, of its Dolphin rocket on 3 August 1984.

Although SSI and Starstruck received authorizations for their launches, the cumbersome and expensive approval process to which the companies were subjected created pressure within the Government further to define how existing regulations would be applied to future launches. This pressure prompted a series of initiatives within the Administration and in the Congress to designate a "lead agency" within the Government to foster further refinement of the licensing process. In November 1983, President Reagan selected the Department of Transportation to perform the lead agency role. In his State of the Union address last January, he directed the Department to assist providers of expendable launch vehicle services in their dealings with the Federal Government. And, on 24 February 1984, he signed Executive Order 12465[10] to delineate the responsibilities of the Department in this regard. A significant portion of the Executive Order deals with the licensing of private commercial launches, directing the Department of Transportation to:

-- Act as a focal point within the Federal Government for private sector space launch contacts related to commercial ELV operations;

-- Provide leadership in expediting the processing of private sector license applications for commercial ELV launches and the establishment and operation of commercial launch ranges;

-- Consult with other affected agencies to promote consistent application of ELV licensing requirements for the private sector and to assure fair and equitable treatment for all private sector applicants;

-- Serve as a single point of contact for collection and dissemination of documentation related to commercial ELV licensing applications; and to

-- Make recommendations to affected agencies and, as appropriate, to the President, concerning administrative measures to streamline Federal Government procedures for licensing of commercial ELV activities.

Since the Department's designation as lead agency, Secretary Elizabeth H. Dole has moved vigorously to implement the provisions of the Executive Order. She established within the Office of the Secretary of Transportation a new "Office of Commercial Space Transportation." This she charged with developing procedures to improve cooperation between Federal agencies and private commercial launch firms in order to facilitate the licensing process and to encourage the growth of this new industry.

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7 SSI sought to import rockets from West Germany for use in calibrating its radar.

8 22 United States Code Annotated, Sec. 2778 (1983).

9 22 United States Code of Federal Regulations, Secs. 121-130.

10 49 Fed. Reg. 7211 (24 February 1984).

Regulatory Objectives

Although a number of Federal agencies retain important interests in the licensing of private commercial space launches because of the implications of such launches (especially those conducted from ranges not operated by the Government) for matters within their jurisdiction, the licensing process as currently structured focuses primarily on securing three separate approvals:

1) an ITAR license;
2) an experimental radio license from the Federal Communications Commission; and
3) an exemption or clearance from the Federal Aviation Administration[11] for the use of controlled airspace.

The role of the lead agency has been one of ensuring that the regulatory interests of all Federal agencies are asserted as early in the approval process as is reasonable and appropriate, that the requirements agencies seek to impose are not duplicative of one another, and that the licensing process operates in ways which eliminate unnecessary Federal intrusion into private commercial transactions.

The efforts of the Office of Commercial Space Transportation -- which played a direct role in securing Federal, state, and local government approval for the Starstruck launch -- have encompassed actual prototype launch activities, radio frequency assignments, transfer of licensing authority, regulation of commercial and Government ranges (including safety and range use requirements), and insurance requirements.

In recent testimony before a committee of the Congress of the United States,[12] the Director of the Office of Commercial Space Transportation described the efforts of that Office to facilitate the licensing process:

> Our primary goal, of course, is to establish an efficient regulatory framework that addresses public safety needs as well as foreign policy and national security safeguards, and that provides predictability for the industry without stifling it. We have found that the problem is not that too many agencies are involved in regulating this industry, but rather that there were almost no Government processes designed to address the wide range of issues and unique needs of private sector ELV launches. The Office of Commercial Space Transportation's actions are aimed at striking a balance in the regulatory environment between an appropriate level of flexibility for an emerging industry and the certainty and predictability that are essential to the success of any private venture. In this effort, there is no shortage of unanswered questions or complicated issues.

The Office's practical experience in handling licensing applications has informed and guided its approach to developing efficient licensing procedures. In striving to simplify and facilitate the process of securing launch approval under existing law and procedure, the Office has relied principally upon three techniques:

1) reduction or elimination of sequential coordination of license applications by Federal agencies;
2) elimination of duplicative review through voluntary reliance, whenever possible, of one agency upon another agency's work; and
3) specification in advance by each agency of the information an applicant must provide before that agency can act upon the application.

Moreover, pursuant to the President's directive to the Department of Transportation to make recommendations for further streamlining the administrative process, the Departments of State and Transportation have agreed, as an interim measure, to transfer from the State Department to the Department of Transportation authority under the ITAR for approving launches of commercial expendable launch vehicles and payloads. The transfer would be effected by issuance of a new Executive Order.

Launch Ranges

The Government has sought to encourage use by private launch operators of its national ranges, and it is anticipated that, at least in the near term, most commercial launch activity will occur from these ranges. Firms such as General Dynamics and Transpace Carriers, Inc., operate launch vehicles which are dependent on the launch facility and resource support at Vandenberg Air Force Base or Cape Canaveral. Although the U.S. Air Force and the National Aeronautics and Space Administration (NASA) are eager to support commercial activities, their rules, regulations and procedures were designed primarily to accommodate the needs of Government operators and not those of private commercial operators.

During the past few months, the Office of Commercial Space Transportation has worked very closely with Air Force personnel to review existing policies,

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[11] The FAA is an administration within the Department of Transportation.

[12] Statement of Jennifer L. Dorn, Director, Office of Commercial Space Transportation, U.S. Department of Transportation, Before the Committee on Commerce, Science, and Transportation, Subcommittee on Science, Technology and Space, United States Senate, (6 September 1984), p.4.

procedures and processes affecting the cost and commercial use of national ranges. This cooperation has resulted in significant progress toward minimizing and eliminating barriers to commercial operations. As a general matter, the Air Force and NASA have been very supportive of the Office's efforts to introduce new ideas, to raise the priority of issues being reviewed, or otherwise to expedite the approval process. The Office is also working with commercial launch firms to facilitate access to the national ranges and to resolve issues affecting commercial use of Government facilities and services.

Despite the Government's efforts to encourage the use of Government launch facilities, a number of commercial firms are giving active consideration to establishing commercial ranges. In contrast to Government ranges, where the Government meets public safety needs by managing the range and the launch vehicles operating from it, the Government is moving to achieve this objective with commercial ranges by approving range location and by setting standards for range design and operation.

Although commercial range regulations will be based on accepted launch and range safety concepts, the regulations must also accommodate differences between Government and private sector approaches to range operation. The Office is now developing concepts and criteria for launch site selection, range design, range and vehicle safety, flight safety corridors and flight termination systems, to name but a few. In order to achieve this, Office personnel have been working closely with Government range safety experts and with launch operations officials from interested firms, drawing in addition upon resources of the Air Force and NASA.

Pending Legislation

Despite the procedural difficulties which are inherent in the current regulatory structure, the fact remains that the licensing process the Federal Government has developed to meet its international and domestic legal responsibilities fully governs the commercial activities in space conducted by U.S. private enterprise. There is, however, a developing consensus within the Government that the system is imperfect and in need of further structural modification. As one American lawyer involved in SSI's efforts to secure launch permission from the Government has observed:

> Despite this designation of a lead agency, the FAA, State, NASA and the FCC will remain key agencies because of their technical knowledge and experience. Moreover, because of the lack of legislation delineating specific jurisdiction over orbit transfer vehicles, space stations, remote sensing, positioning systems, materials processing, power generation, and data collection systems, several additional agencies and institutions have influence over the approvals process. These agencies include the United States Congress, the Department of Defense, National Security Council (and others in the intelligence community), the Department of Commerce, the Office of Management and Budget, the Office of Science and Technology Policy and most recently, the Interagency Group for Space. An adverse position or decision from any of these agencies or institutions has the potential for halting any private rocket launch or space activity.[13]

Because of these and similar expressions of concern, the Congress, with the support of the Administration, is considering enacting legislation to replace the present ITAR process by giving the Secretary of Transportation virtually exclusive authority[14] to issue or transfer licenses for launches of commercial space vehicles and payloads as well as for the operation of commercial launch ranges. The legislation would establish the requirement of a license for the launch of any launch vehicle or the operation of any launch range located in U.S. territory, and would authorize the Secretary to prevent the launch of any payload that would jeopardize national security, foreign policy, or public health and safety interests of the United States. The Secretary would be authorized to issue a license following consultation with appropriate agencies and could condition or otherwise limit activities authorized by the license by imposing specified standards -- including minimum third-party liability insurance requirements. The legislation also proposes to give the Secretary final authority to inspect and verify launch operations, including the assembly and integration of payloads and launch vehicles.

Thus, the proposed legislation builds upon the experience of the Office of Commercial Space Transportation with the licensing of launches and payloads under existing laws and regulations. In a number of important respects, it seeks to enact into law the general approach to regulating commercial space endeavors which the Government has developed to date. The

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[13] Dula, supra, note 6, at p.13

[14] The requirement that launch operators obtain a separate authorization from the Federal Communications Commission would be retained.

primary goal of the legislation is to establish centralized licensing authority and procedures which can more efficiently identify and incorporate the varied interests and responsibilities of Federal agencies and can ensure that license applications are acted upon in a timely fashion. It must be emphasized, however, that should the Congress fail to enact such legislation, the ITAR and other existing authorities would continue to provide valid and adequate legal predicates for asserting Federal jurisdiction over the space-related activities of private commercial entities.

Conclusion

The United States Government is nearing completion of an intensive effort to articulate its fundamental interests in private commercial space activities and to provide an expeditious means for ensuring that such activities are consistent with the Government's international and domestic responsibilities. The goal of this effort is to clear the way for "commercial exploration of space" by private enterprise. Successful commercial development of space technologies requires that the private sector has assured access to space, and an increasing number of private firms are eager to provide that access. A critically important corollary to that effort is the Government's commitment to devising a licensing program which is both responsive to public concerns as well as sensitive to private commercial needs.

Indisputably, the U.S. Government has significantly expanded, during the past two years, its efforts to ensure that its regulatory procedures are fully consistent with its domestic and international responsibilities. As a result of those efforts, we are rapidly approaching a time when regulatory procedures can no longer be considered unreasonable barriers to space and when conflicting or confusing standards are replaced by administrative regularity and certainty.