THE U.S./INTERNATIONAL SPACE STATION

John E. O'Brien *

The world community is about to cross over the threshold of the Space Station era. Exciting as this may be, the idea is not new. Mankind has long dreamed of space platforms designed for a variety of useful purposes. This has been especially true here in the United St[1] ates. In fact, as the U.S. planned its post-Apollo space program, a Space Station serviced by a Space Shuttle was considered desirable. However, in the early 1970's it became apparent that budgetary considerations would not permit simultaneous development of both. Accordingly, the political decision made by President Nixon was to proceed with the development of a Space Transportation System which could support a variety of future space activities including a Space Station some day. Therefore, the U.S. proceeded with its Space Shuttle program with the timing of a Space Station decision deferred until a more favorable future time. By the way, it appears that the Soviets, when confronted by a similar choice, made the opposite decision. They proceeded with their station concept and deferred development of their version of a Space Shuttle. In any event, it was not until the Reagan Administration took office that the subject of a Space Station acquired any fresh political momentum.[1] This is not surprising when one considers President Reagan's overall vision of space exploration.

Sample Legal Issues

As we look forward to the initial operational capability of the Space Station and the international participation in its activities, the partners are addressing and assessing the range of legal issues which are

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1. *See* 20 WEEKLY COMP. PRES. DOC. 61 (1984) (President Reagan's address committing U.S. to the building of a permanently manned space station before the mid-1990-s).

bound to arise.[2] Initial understanding on some of the issues are being attempted in the current negotiations between the U.S. and Canada,[3] Japan[4] and the European members of ESA.[5]

Agreement will be reached on some matters, however, some longer term issues will probably be left as the "common law of the Space Station." Allowing a "common law" to develop may be desirable, if not necessary, due to our general lack of familiarity with the effects of a Space Station environment in the context of a permanent manned presence and the undefinable parameters of the extent of interaction between representatives of diverse societies.

It is not my intention to attempt to identify all or nearly all the potential legal issues nor stake out a final position on any of those mentioned. My intent is to merely highlight a sample menu, the contents of which will come as no surprise.

Jurisdiction and Control

A basic legal issue which may or may not lead to a solution to other legal issues involves who has jurisdiction and control over all or a portion of the Space Station. The possibilities appear to be jurisdiction and control by one nation, individual nations in accordance with their contributions or some form of joint jurisdiction and control by the

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2. There has been an ever growing literature on the legal aspects of space stations. *See, e.g.*, **K.-H. BOCKSTIEGEL, SPACE STATIONS: LEGAL ASPECTS OF SCIENTIFIC AND COMMERCIAL USE IN A FRAMEWORK OF TRANSATLANTIC COOPERATION** (Koln, 1985); **DEUTSCHE GESELLSCHAFT FUR LUFT- UND RAUMFAHRT E.V., COMMERCIAL USE OF SPACE STATIONS: THE LEGAL FRAMEWORK OF TRANSATLANTIC COOPERATION** (Bonn, 1987); **D. SMITH, SPACE STATIONS: INTERNATIONAL LAW AND POLICY** (1979). Reference to additional sources can be found in these publications. On scientific and other aspects, *see Space Station: Policy, Planning and Utilization,* 10 **A.I.A.A. AEROSPACE ASSESSMENT SERIES** (1983).

3. Memorandum of Understanding Between the National Aeronautics and Space Administration and the Ministry of State for Science and Technology for a Cooperative Program Concerning Detailed Definition and Preliminary Design (Phase B) of a Permanently Manned Space Station, April 16, 1985.

4. Memorandum of Understanding Between the United States National Aeronautics and Space Administration and the Science and Technology Agency of Japan for the Cooperative Program Concerning Detailed Definition and Preliminary Design Activitites of a Permanently Manned Space Station, January 9, 1985.

5. Memorandum of Understanding Between the National Aeronautics and Space Administration and the European Space Agency for the Conduct of Parallel Detailed Definition and Preliminary Design Studies (Phase B) Leading Toward Futher Cooperation in the Development, Operation and Utilization of a Permanently Manned Space Station, June 3, 1985.

participants. This issue encapsulates within it the matter of registration in accordance with the 1976 Convention on the Registration of Objects launched into Outer Space.[6] Should registration be the driving force to decide who has jurisdiction and control over any portion of the Space Station? Or should this be determined as a matter of agreement between the United States and its partners as permitted under Article II of the 1976 Convention? How this is finally resolved will go a long way in resolving some of the Station management issues.

Criminal Law

Here we are faced with the fascinating range of possibilities from serious criminal activities to simple misdemeanors. The immediate problem, of course, is that there is no uniformity among nations as to what constitutes criminal activity. Beyond that there are many other problems such as extradition treaties, or lack thereof, between nations represented on the Space Station, authority to apprehend and incarcerate, and subjugation of individuals to foreign criminal laws and courts. Should the solution to the "jurisdiction and control" issue dictate a solution to the criminal law issue by subjecting individuals to the criminal laws of the nation having jurisdiction and control over that portion of the Space Station where the crime is committed? Would it be fair to harness individuals with knowledge of the criminal laws of other participating nations? Or should the nationality of each individual dictate the applicable criminal law no matter where the individual is located on the Space Station when a violation occurs? Should this be a matter of agreement between participating nations?

There have been several views under active discussion within the U.S. One position would place primary jurisdiction in the State of the accused unless waived by the accused in which case secondary jurisdiction could be exercised by the State of the victim or the State of registry of the location of the alleged criminal event. A second view would place primary jurisdiction in the State with physical custody of the accused. Under this approach, it would be anticipated that the State of primary jurisdiction would give sympathetic consideration to a waiver request if a crime was committed against the property or security of a secondary State, the victim is a member of a secondary State crew, or the accused is a secondary State national. A third view would be to ignore the subject in the Inter-governmental agreements and let the "legal chips" fall where they may.

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6. Convention on Registration of Objects Launched into Outer Space, entered into force Sept. 15, 1976, 28 U.S.T. 695, T.I.A.S. No. 8480.

Civil Causes of Action

Although there is an established nexus between the 1967 Outer Space Treaty[7] and the 1973 Liability Convention[8] and launching states, there are many unanswered questions on several levels of activity on the Space Station. Leaving aside the potentially uncertain application of these international laws to activities onboard the Space Station, there are knotty problems involving individual rights, property damage and destruction, and third party liability. Once again, we are immediately confronted with diverse national laws dealing with the entire subject. Many of the same issues are present here as in the case of criminal law application. Should the law follow the individual? If so, should it be the law of the plaintiff's residence, domicile, or should the law be determined by agreement between the international partners? It certainly is a vexatious issue.

Interparty Waiver of Liability

The approach to an international interparty waiver of liability builds upon and expands the NASA approach for the Space Shuttle. It would apply to claims and liabilities arising out of "Protected Space Operations" as defined in the agreements when both the cause of the damage and the damage itself occurs during such operations. Under the approach contemplated, no international partner, party, contractor, subcontractor, or supplier may sue: another party; a related entity of another party; related entities of the same party; the other partners; a related entity of another partner; and employees of the foregoing. Although the coverage would be quite broad, it does not preclude lawsuits: based on contractual relationsips; made by a person or estate or survivor for injury or death or damage to the third parties; or based on intellectual property rights.

Third Pary Liability

Third party liability as it relates to the Inter-governmental agreements is limited to the liability of States and not individuals or business concerns. Clearly, the liability of States for damages flows from

7. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, entered into force October 10, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205.

8. Convention on International Liability for Damage Caused By Space Objects, entered into force for United States October 9, 1973, 24 U.S.T. 2389, T.I.A.S. No. 7762.

the Liability Convention[9] and the Registration Convention.[10] Under the approach the State of registry is the launching State for purposes of the Liability Convention and the State of registry holds harmless any jointly or severally liable States. There would be, of course, other third party liability issues involving users of the Space Station and contractors supporting various Space Station activities. This will have important insurance implications.

Insurance

The immediate concern about insurance in the context of the Space Station is the all too familiar "three C's"; capacity, cost, and continuity. Whether space insurance will be available for Space Station activities is an unknown. If it is not, then participants will be faced with serious decisions on self-insurance and/or indemnification. Absence of insurance will necessarily have an impact on potential commercial uses of the Space Station. Commercial users may require property and third party liability protection from their States as a condition of participation. If the usual insurance is available and affordable, the insurance industry must also be adaptable to new forms of insurance they may not have thought of before. Examples would include life, accident, workman's compensation, personal effects and "Good Samaritan" insurance.

Proprietary Rights

A fundamental issue arising from the nature of activities anticipated on the Space Station involves intellectual property rights. This will be accentuated by the introduction of commercial use of the facility where risk-takers will demand assurance that their investments are secure. The protection sought by participants and users alike will involve the familiar family of protections: patents, trade secrets, and copyright. The U.S. concept regarding patents is basically territorial in nature with a concurrent right of the inventor to file in his or her own State. This means that for the purpose of applying patent law to inventions made on the Space Station, the activity leading to the invention would be deemed to occur within the State which registered the Station element within which the invention is made. If the inventor is not a national of the State whose patent law applies, the inventor will nevertheless have the right to file for patent protection in his/her own State.

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9. *Supra*, note 8.

10. *Supra*, note 6.

Technology Transfer

Inherent in the international participative Space Station program is the issue of technology transfer between the partners. Because of the many technical interfaces involved in an undertaking such as this, a certain amount of technical information must be shared by the partners. But how much is enough? Is there a point beyond which nations are not or should not be expected to be willing to part with unique technical information known only to themselves? A case in point is the United States which has certain export control laws and a critical munitions control list which discourages the sharing of certain technical information with other nations. Compromises must be identified which will allow for needed technical interfaces between the International partners without violating the national security interests of any of them.

Taxation

One fact of life which must also be addressed has been with us since Biblical times - taxes. It would appear to be a truism that whenever a new source of revenue-producing income is discovered there is sure to follow a new form of taxation for the privilege of discovering it. Whether significant commercial interests decide to experiment with the Space Station for economic gain may depend upon the tax structure within which they will be required to operate. There could be a dilemma here. Tax laws of partner States may have to forgive early participation of its private sector interests in order to stimulate this new "space economy" or "Astrobusiness" as Ed Finch has christened it. Yet, as in any other business, "Astrobusiness" should probably be subject to taxation as any other. Why not? The questions are when, by whom, and how much? There is a great deal of thinking necessary here. For example, in the U.S. context, there could be an over-arching U.S. tax issue, but also, there could be a State issue. The U.S. Government might or might not exact a tax on U.S. commercial space activities, but how about individual State governments? Could Florida as the State from which a payload is launched impose a tax of some kind? Florida or California as the "landing States"? Any other State in which the entity is incorporated or has its headquarters? And, how about States through which any data passed? Was it "enhanced" or "value added" thereby justifying taxation? There is much work to be done here in the future. For the present, however, in the Inter-governmental Agreement setting, probably the simplest approach to application of tax laws is to deem that activities on the Space Station have occured in the State of residence of the person deriving income from the activities.

Conclusion

Within the United States Government, development of coordinated legal positions supporting the U.S. posture in the international

negotiations is being performed by an Interagency Legal Working Group. The Working Group membership includes participants from the State Department, NASA, the Office of Management and Budget, and the Departments of Commerce, Treasury, Justice and Transprotation. This process insures that a broad spectrum of U.S. legal interests are considered before final positions are established for negotiation with our international partners. These negotiations, temporarily suspended earlier this year while the interest in the Space Station by the U.S. Department of Defense was sorted out, are proceeding diligently. Once the Inter-governmental Agreements are finally concluded, the latest chapter in the development of space law will have been written. Thereafter, it will be a matter of good faith implementation, refinement of concepts, and composition of the next chapter. It remains mind-boggling!