

**International Institute of Space Law
2002 Colloquium (Houston, Texas, USA)**

SESSION 1: Space Assets: Legal Aspects of Financing and Risk Management

Chairmen:

Dr. A. Dula

Ms. F. Schroeder, Esq.

Rapporteur: Wayne White

Prof./Dr. Frans von der Dunk commented that he had read the paper by Drs. Patricia Sterns and Leslie Tennan. He said that he it was a very good paper and that he agreed with their conclusions. Prof. von der Dunk then said that since we all seem to agree with Sterns and Tennan’s conclusion that private appropriation is prohibited by Article II of the Outer Space Treaty, is this not an appropriate topic for an IISL position paper?

Dr. Wayne White said that he did not agree with Sterns and Tennan’s conclusion regarding private appropriation and that he did not believe that everyone agreed with that conclusion. Dr. White said that Article II of the Outer Space Treaty would in effect prohibit traditional real property rights. It would not, however, prohibit the limited form of property rights that he has proposed, because those rights are based on the jurisdiction conferred in Article VIII of the Outer Space Treaty, and on the safety zone concept.

Dr. Sylvia Ospina said that you need to be clear how you define the term “traditional property rights.” Also, there is confusion regarding the difference between the right to use outer space and the right to own outer space.

Ms. Edythe Weeks said that she is doing her doctoral dissertation on outer space law and her studies clearly indicate that there is not agreement on whether the Outer Space Treaty permits property rights. In fact, she said, when she raises the issue of property rights in a group, it is clearly the most contentious of all space law issues. The IISL needs to address this issue.

Mr. Paul Blase said that his company **TransOrbital** plans to land a private space object on the Moon in the near future, so the issue of protecting space objects and mining activity is imminent. Even if our company is not successful, there are at least five other U.S. companies with similar plans.

Dr. Tanja Masson-Zwaan said that the right to mine is not forbidden, but the right to appropriate is prohibited. What is prohibited to nations is prohibited to its nationals. Protection of mining activity is different from the prohibition against appropriation. I do accept the concept of a safety zone as a valid concept.

Prof./Dr. Maurice Andem said that property rights is a crime against humanity— the Moon and other celestial bodies are the common heritage of mankind.

SESSION 2: ISS and the Law (e.g. international property law, IGA)

Chairmen

Dr. A. Farand

Prof. M.H. Fonseca de Souza Rolim

Rapporteur: Kenneth Weidaw III

The first paper was presented by Gabriella C. Sgrosso (Italy) entitled: "Application on the Rules of the Code of Conduct to the First Crews on Board the International Space Station." This paper focused on the aspects concerning the Code's application and on the coordination between the Code and the internal systems of the Partner States. The paper gives special attention to the questions concerning the jurisdiction and control over astronauts, from the Station and from transport shuttles, during the activities outside the ISS. She concluded that the new Code - a set of common rules or "flight rules"- is a system used primarily to solve problems concerning jurisdiction over the crew.

The second paper entitled, "Implementation of Intellectual Property Law on the International Space Station" was presented by John G. Mannix (USA). The author notes that one of the primary methods by which the ISS will create new economic value is through the creation of intellectual property and capitalization of business enterprises involved in licensing new innovations and inventions and developing new commercial products and services. He believes that protection and ownership of intellectual property are critical to the success of most businesses. The purpose of his paper is to provide an overview of the systems of agreements, regulations and provisions concerning the treatment of intellectual property and to explain how proprietary data and goods will be exchanged and protected in the ISS environment with reference to the Intergovernmental Agreement and the Memoranda of Understanding.

The third paper was presented by John B. Gantt entitled, "Status of Multilateral Space Agreements In International and United States' Law." The paper addresses the status in international law and United States' law of the Intergovernmental Agreement and the Memoranda of Understanding between the ISS partners. The author concludes that both the Agreement and the Memoranda are international agreements enforceable under both international and United States' law.

The final paper presented was by Liara M. Covert who wrote on the subject, "Commitment and Compliance in the Evolution of the International Space Station (ISS) Program." The paper consider to what extent and under what conditions ISS Partners re-evaluate or modify their notions of commitment and compliance. She considers the perspectives of each of the international partners with respect to their commitment and compliance to the demands of the ISS project as set forth in the Intergovernmental Agreement and the Memoranda of Understanding. She notes that the partners are constantly confirming, modifying and re-defining their ISS commitments in light of business and economic circumstances facing each of them.

SESSION 3: International Security and Military Uses of Outer Space: Legal implications

Chairmen

Prof. J. Galloway

Dr. E. Fasan

Rapporteur: Marco Ferrazzani

This session has enjoyed a wide variety of papers from many authors and of opinions expressed on a topic of current general interest.

According to CHRISTOL, although is doubtful whether the US President can unilaterally terminate the ABM Treaty without consulting the Senate, he can well carry out any act representing the country in matters of military use of space.

HASHIMOTO explored the relationships between ballistic missiles and space law, demonstrating that environmental law cannot limit the right of self-defense. International security in space should be based on a rationale and logic of shared defense and not of defending only one country. Usage of space needs consideration of international security. The international community must remain realistic both on earth and in space, as any real dispute on earth will inevitably also extend into outer space.

ANDEM stressed the concept of *Pacta sunt servanda* and the supposed change in the ABM treaty conditions relating to the doctrine *rebus sic stantibus*, indicating also that many similar principles are codified in international and domestic laws. He also referred to history and to international law whose main purpose is to maintain peace and mentioned military defense whose main purpose is to lower the threat to international security.

GOH underlined how space law is expressing the dualism between peace and war, idealism and realism. The paper explores related issues on use of dual technology and law of war. She goes on proposing using space only for peaceful uses and codifying some exceptions, via new principles to regulate acts of war towards satellites.

DE ANGELIS holds the view that new warfare in space is obvious as it is a market to control and that it will soon happen under an unclear and controversial legal regime, with acts of terrorist groups.

HEATH underlines how new warfare in space falls still under the laws of war and its 4 established principles. New security threats will justify uses of space weapons, which themselves allow for the respect of laws of war.

COCCA emphasized that law principles are to maintain peace, not to justify force, stating that a militarization or any weapon in space will infringe space law. The proposal is to arrange for peace, not to prepare for war.

CHARANIA explained in detail the planned deployment of weapons of space, including a space plane based on US defense requirements.

TAKAYA analyzed the case of GNSS, which is now widely used also for peaceful purposes. GNSS is non-aggressive and as such does not violate specific provisions of space law, but since it supports all modern weapons, it may help destabilize peace and security and therefore breach international law.

ACHILLEAS examined the use of space for purposes of propaganda under several cases and examples. Although space law does not directly mention propaganda, general international law principles and treaties contain several provisions, imposing some conditions, which also apply to space activities.

CATENA displayed a video with footage putting forward several political and legal issues. An issue such as limiting the deployment of weapons requires a consensus on a definition on what is a space weapon.

LEE argued on the UN Charter, its chapter VII and binding decisions under its authority, which may prevail over space law obligations.

GAL stressed that military space activities depend on interpretation which is given of space law.

DRISCOLL indicated how present space law is not sufficient to prevent abuse and how US plans on warfare in space do not help international security. In the present context of terrorists' attacks, there is a need to clarify definitions and principles and to establish an international management system to be based on law.

ZHUKOV explains its view on military satellites to enhance international peace and security, via more transparency. This holds precedents with examples in disarmament and in confidence building measures.

During the animated debate several interventions were made by:

TEREKOV mentioned the Outer Space Treaty, which in its recital also recalls the UN Resolution of 1947 on condemning propaganda.

FREELAND on military use of space, in reality a lot happens in the practice of State since beginning of space age. Need for up to date clarification of the meaning "peaceful purposes". Maybe IISL can help this work of definition.

DOYLE: appreciates the high quality of papers at this Session. Recalls that political and legal studies were already done on this topic in the past and publications on implications for civil space systems, disarmament and security. Dual use concept to be examined carefully otherwise space may be taken easily for military use.

FERRAZZANI intervened to stress the functional connotation of the definition peaceful purposes. It all depends on the way actually space is used by States and not just on some a priori definition such as “military” or “dual use”.

GABRINOVICZ commented in detail on the issues raised by a paper about US President powers of war.

TAKAYA underlines how such topics are of large interest to many students.

One representative from the Space Generation Summit explained that they produced a Houston Declaration on preventing weapons and military use of outer space; it is signed by a large number of young people attending WSC 2002.

SESSION 4: Other legal matters, including legal aspects of launching services

Chairmen:

Kai-Uwe Schrogl

A.D. Terekhov

Rapporteur: Yuri Takaya (Japan)

Rosenberg (USA) presented “Liability Risk-Sharing Regime For U.S. Commercial Space Transportation: Study and Analysis” written by **Patricia Grace Smith** (USA) who examined the liability risk-sharing regime in commercial launching activities. According to the author, in order to maintain adequate space launch third-party liability insurance capacity including catastrophic risk protection, it is necessary to establish tax subsidies in consistence with the current regime.

Several questions were made to the presentation, mainly by **Sylvia Ospina** (USA), regarding cost-estimate of subsidises and trade services agreement. The presenter pointed out the difficulty of cost-estimate and the necessity of measuring the marketing impact. In regard to the registry of space object, Department of States is in charge of implementing the Registration Convention. In addition, she added that trade identification is for the eligibility, not for the sovereignty.

The paper “Perception on the Definition of a Launching State and Space Debris Risks” by **Maureen Williams** (Argentina) was summarized by Monserrat Filho (Canada). The author examined the definition of a launching state and space debris risks that emerge from commercial space activities. He concluded that national space legislation should include the issue of authorization and supervision in the procedure of licensing of private launch services, for the availability of compensation under the requirements of Article VI of the 1967 Space Treaty. In regard to space debris risks, it is necessary to set up the insurance system with effective domestic legislation, in order to enable private entities to meet the liability requirements.

Kai-Uwe Schrogl (Germany) presented a report, with co-writer **Charles Davies** (UK), “A new look at the launching State – The results of the UNCOPUOS Working Group 2000-2002” to give the outcome of the Working Group which aims to analyze the legal

concept of the “launching States” in order to increase adherence to the Liability and Registration Conventions and to promote their full applications. The three recommendations were raised during the three-year-working; 1) States conducting space activities need to implement national laws to authorize and provide continuing supervision for private sector, 2) according to Article V, Para 2 of the Liability Convention, States need to consider the conclusion of agreements with respect to joint launches or cooperation programs, 3) States need the consideration of harmonizing voluntary practices that would provide useful guidance in a practical context to national bodies. Thus, the stress was on the development and practice of national space legislations which would implement the obligations of States Parties.

Valnora Leister (Brazil) presented the paper “Brazil-Ukraine Partnership for the Use of the Alcantara Launch Center” which analyzed the motivations, the goals and the legal aspects of the Brazil-Ukraine Technological Safeguard Agreement as well as the MOU relating the commercial use of the Brazilian Alcantara Launch Center (CLA). The author described restrictions imposed by US on the export of launching technologies from the CLA. According to him, taken with national licensing systems on commercial space launching, it is clear that bilateral technological safeguard agreements limit opportunities for commercial launch organizations to operate in a truly international and depoliticized manner. Therefore, in order for “benefit of all mankind”, a new approach should be in place that promotes uses of space technology in international project.

In his presentation “Launching Alcantara into the Global Space Economy – The 2001 Brazilian National Space Law: The Continuing Story of National Implementation of International Responsibility and Liability, Part II”, **Frans G. von der Dunk** (The Netherlands) examined the Brazilian space legislation that allows private launching activities within the jurisdiction of Brazil. The current Brazilian Edict and Regulation form a first coherent effort to establish a legal framework for private space launches from Alcantara, by providing for the registration of space objects under the licensing of the Brazilian Space Agency (AEB). Even though the registration of space objects is not provided by Edict and Regulations in line with the Outer Space Treaty and the Registration Convention, the licenses by AEB and the launch phases of space objects are to fulfill the obligations if the relevant elements would be openly accessible.

Steven R. Freeland (Australia) presented the paper “The Impact of Arms Limitation Agreements and Export Control Regulations of International Commercial Launch Activities”, co-written by **Ricky J. Lee** (Australia), which analyzed the implications and regulatory impact of arms limitation treaties, START framework, on commercial launch operations. According to the authors, it is important for the interests of world peace and international security to maintain strict technology controls; however, such export-import control could be an obstacle to space business. The authors proposed to create “Global Export Control License” based on the Wassenaar Agreement for economic benefits of commercial launching operations, which need transparency and accountability requirements for simplification of the regulatory burden of export controls.

In the paper entitled “Licensing Procedure Established in the Mexican Law for the Operation of Satellite Orbits Assigned to Mexico and for the Transmission of Signals Coming from Foreign Satellites”, **Rosa Maria Ramirez de Arellano** (Mexico) and **Y. Arvide** (Mexico) examined the licensing procedures for satellite operations under Federal Telecommunications Law in Mexico. Deregulation of satellite sector under the Federal Constitution of 1995 allows the provision of foreign satellite capacity services in Mexico; however, the licensing procedure leaves legal issues in the gap between national and foreign operators. Therefore, it is necessary to create a new regulation which contributes to the development of satellite services by improving licensing procedure and investment on its activities with support of the Mexican Government.

Monserrat Filho (Canada) summarized the paper “The Brazilian Space Licensing Regulation”, written by **Altair Stemler de Veiga** (Brazil) and **Walteno Marques da Silva** (Brazil), which examined the current Brazilian space legislation to accelerate further improvement of its legal framework for the national interest. According to the authors, in order to increase the awareness of the space launching market, Brazilian institutions relevant to space should play an essential role to improve and achieve a better development of space national legislation for the commercial utilization of the Alcantara Launch Center structure.

In the presentation of “Evolving Space Law and World Political Hegemonies”, co-written by **Patrick A. Salin** (Canada), **Monserrat Filho** (Brazil) presented some central aspects of the role exerted by world hegemony powers in the creation, development and orientation of Space Law. The authors pointed out the importance of insisting on preparation for multipolarity in space activities, which would generate the global public interest with influence on the current space politics and law.

The paper presented by **F. Kenneth Schwetje** (USA), written with **Dennis J. Burnett** (USA), was entitled “U.S. Export Controls and Litigation of Contracts: Another Example of the Law of Unintended Consequences”. The authors explained how to minimize the conflict between the current export control regime of U.S. and general dispute resolution mechanisms and procedures. In order to avoid imposing additional burdens to the trial teams and courts, the case of defense technology transfer should be considered by corrective measures under the cooperation among Department of State, Department of Justice and Department of Defense.

A question regarding VISA problem was given to the author whether export control concerns personnel as well as technical data. The author clarified that the presentation focused on technical data under DOS, not including VISA issues.

Andrew Aldrin (USA) presented a report “Organizational Solutions for Problems of Technology Transfer in Global Technology Programs” which gave the final outcome of space policy department in summer program of International Space University, held in Bremen, 2001. In the paper, relevant international export regulations which could be an obstacle for international cooperation were examined to urge private sector to start global space business.

A question was given by **F. Kenneth Schwetje** (USA) on the reaction of Department of State of US about export control since it is broad and national security concerned. The author described it as durable; in addition, regulatory legislations are also changing under DOS.

In the paper “Learning from the X Prize eXperience”, **C. Heather Walker** (USA) reviewed the current safety and liability issues raised in the development of the commercial RLV industry including licensing issues. According to the author, the new safety and liability issues for the testing RLV, targeting at X-Prize need to be considered under governmental agencies, especially in regard to licensing for the testing of unproven vehicles.

Comments were made by **Paul Larsen** (USA) on liability and safety issues and the author added the necessity of risk management for commercial operation of RLV.

In the paper “The Lunar Base: Liability in Perspective”, **Kenneth M. Weidaw III** (USA) examined the liability issues for continuous exploration of the Moon. The author recommended limiting the liability of the private consortium to assure completion of the long-term development program. The legislation must prove beneficial for commercial development activity upon the Moon, especially real property rights relating to ownership of the permanent of lunar base, the minerals and the mining rights upon and under the lunar surface need to be considered promptly. In addition, for lunar base project, a new international treaty that clarifies the significant liability is necessary.

Yuri Takaya summarized the paper “Space Debris Measurement, Analysis and Study a Tool for Global Cooperation” written by **Mohsen Bahrami** (Iran). The author reviewed the current status of existing space debris, measurement, and cataloging activities and proposed to create a global network for debris measurement, analysis, and study, for taking advantage of existing global possibilities and capabilities.

Elizabeth Bloomer (SGS participant) presented the outcome of space policy working group of Space Generation Summit (SGS), which was held during World Space Congress, entitled “Space Policy Perspectives of Young Space Professionals”. The author aimed to accelerate the youth participation in space activities by several proposals (e.g. Establishment of international space authority, international space chamber of commerce, a global space prize, space based security, a global treaty, etc) which were made to enhance awareness of policy-makers in the world.

Joanne Irene Gabrynowicz (USA) explained the situation after the events of September 11, 2001, that the U.S. Federal Government and Space Imaging Inc. entered into a contract in which the U.S. government had exclusive access to images of Afghanistan and surrounding areas. Her paper addressed the legal issues raised by the contract under U.S. domestic and international law. After analyzing a number of aspects of the contract, the author concluded that the contract set a precedent which is a presumption of openness. This presumption arises from the fact that after a brief period of exclusivity,

the images were made commercially available to the public. Therefore, she concluded that images held exclusively will and must be made available. The only open issue is what the shortest time that images can be withheld is. In other words, what is the shortest time that can be considered “reasonable”?