The Space Protocol to the CAPE Town Convention and the Space Law Treaties

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The paper will describe points of intersection and identify problem areas between the Space Protocol to the Cape Town Convention and the space law treaties; specifically, under the space protocol:

- 1. What is the responsibility and jurisdiction of the creditor state under Outer Space Treaty (OST) after default? The OST governs satellite operations in outer space. Art. VI establishes responsibility of treaty parties to authorize the activities of their commercial satellites and exercise continuing supervision for compliance with the OST. States are liable for damages caused by their satellites (Art. VI). States retain jurisdiction and control over satellites on their registry and state laws govern ownership and transfer of ownership to satellites (Art. VIII). Furthermore, states are responsible for harmful environmental effects (Art IX).
- 2. What is the responsibility and jurisdiction of the creditor state under the Rescue and Return Agreement (RA) after default? The OST, Art 8, and the RA Art 5, provide for return of lost space objects to the launching state. Furthermore, the RA requires launching States to eliminate harmful substances such as NPS and other dangerous fuels deposited by their satellites in other states.
- 3. What is the responsibility and jurisdiction of the creditor state under the Liability Convention (LC) after default? The LC assigns liability to launching states for damages caused by space objects to the Earth and to space objects in outer space. The Space Protocol arranges for transfer of possession to satellites upon default thereby raising the question of transfer of that liability obligation to the Transferee State.
- 4. What is the responsibility and jurisdiction of the creditor state under the Registration Convention (REG) after default? The REG requires the launching state to register space objects launched into outer space. The paper will discuss the registration

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responsibility of the creditor state after default and the consequence of failure to undertake that responsibility.

- 5. What is the responsibility and jurisdiction of the creditor state under the UNGA debris mitigation and other international guidelines after default? Several satellite operating rules have been established by COPUOS. The paper will discuss compliance with those rules.
- 6. What is the responsibility and jurisdiction of the creditor state after default? Draft Art. XXXIV establishes precedence of public law space law treaties and ITU instruments over the private law provisions of the protocol establishes precedence of public law space law treaties and ITU instruments over the private law provisions of the protocol.

I Introduction

A Negotiation of the Space Protocol

The 2012 Space Protocol to the Cape Town Convention on International Interests in Mobile Equipment is one of three separate Protocols to the Cape Town Convention¹.

Protocols on rail and aircraft equipment were previously concluded. Whereas the 2001 Cape Town Convention establishes the basic framework, the three modal protocols (aircraft, rail and space) are each specially designed to suit the needs of its individual mode. Thus the Cape Town Convention applies only as modified and separately applied by each Protocol.

The Space Protocol, on entry into force, will establish a separate international registry of security interests in space assets. The registry and the registrar will be guided by the Supervisory Authority.³

Properly registered security interests will be specially identified in and protected⁴ under the terms of the Cape Town Convention as modified by the Space Protocol. The ultimate objective is to facilitate financing and lower the cost of space asset financing.

¹ Convention on International Interests in Mobile Equipment (hereinafter Cape Town Convention), UNIDROIT 2011-DCME-SP- Doc.4 Appendix. See Sir Roy Goode, Convention on the International Interests in Mobile Equipment and Protocol Thereto on Matters Specific to Aircraft Equipment, Official Commentary, Rev. Ed. (Unidroit 2008).

^{2.} Id.

³ Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets, (hereinafter Space Protocol) Art. XXXVIII. (<www.Unidroit.org>).

⁴ They will have priority similar to mobile property registered in state registries under the Uniform Commercial Code(UCC) in the United States; see discussion of UCC in Larsen and Heilbock, UNIDROIT Project on Security Interests, 64 J. Air. L. & Com. 703 (1999).

The Space Protocol specifically does not disturb the contracting states' authority over launches and operation of space assets.⁵ Neither does it disturb state regulation or title transfers.⁶ The Protocol does not affect use of orbital slots or radio frequencies.⁷ It does not affect States' control of command codes.⁸ Furthermore the Protocol does not require contracting states to recognize application of the Protocol when such would result in conflicts with export or national security regulations.⁹

The rights of States to continued commercial satellite service during insolvency and default of commercial satellite service are conditionally protected under the Protocol.¹⁰ It provides that if a space asset is the subject of a State filing of a 'public service notice' the asset must remain available for service in that State for a period of three to six months while the debtor seeks to remedy payment default. During that period the creditor may seize control of the space asset to provide continued service.¹¹

The public space law context of the Space Protocol is particularly interesting because of the interplay between the outer space public law treaties and the private international space law. Art. XXXV of the Protocol specifically provides that the Protocol shall not affect States' rights and duties under the existing UN space law treaties and the ITU legal instruments.¹² The question now is whether the Space Protocol fully respects this public law supercession clause.

B The Commercial Space Industry

The existing outer space legal regime was created at a time when most space activities were governmental.¹³ Consequently benefits and corresponding

⁵ Space Protocol, Art. XXVI.

⁶ *Id*.

⁷ *Id.*

⁸ *Id*.

⁹ *Id*.

¹⁰ Id. Art XXVII.

¹¹ Id. Art XXVII.

The five UN space law treaties relevant to this discussion are:

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (Outer Space Treaty), 610 UNTS 205. Convention on Registration of Objects Launched Into Outer Space (Registration Convention), 1923 UNTS 15. Convention on International Liability for Damage Caused by Space Objects (Liability Convention), 961 UNTS 187. Agreement on Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (The Rescue and Return Agreement), 672 UNTS 119. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement), 1361 UNTS 3. Additionally these ITU legal instruments: Constitution of the International Telecommunication Union and Convention of the International Telecommunication Union, <w href="www.itu.int/net/about/basictexts/index">www.itu.int/net/about/basictexts/index.

¹³ Lyall and Larsen, Space Law A Treatise, at 42 (Ashgate 2009).

obligations and duties relating to outer space activities were assigned to the States. The only literal reference to nongovernmental activities is in the Outer Space Treaty, Art VI. In Art. VI the States Parties accept responsibility for the activities of non-governmental entities. In Art. VII the Contracting States are made liable for their nongovernmental activities. Thus the Outer Space Treaty and in turn the Liability Convention made States liable for a collision involving nongovernmental entities causing damages in other States. Victims can only recover under the Liability Convention if they can persuade their State to press claims on their behalf.

Significant non-governmental activities in outer space were simply not contemplated at the time when the existing outer space legal regime was formed. In fact one of the two early space powers, the Soviet Union was opposed to nongovernmental activities in outer space.¹⁴

Nevertheless, in the nineteen eighties an increasingly strong influx of non-governmental enterprises began. Commercial outer space activities are mostly concentrated in the United States but are spreading all over the world. These enterprises became subject to a legal regime built for State activities, but the regime did not fit them very well.

Commercial space enterprise is now a strong force for social and commercial progress. A healthy and vibrant commercial space segment supports millions of people. The total global space economy in 2011 was estimated at \$289 billion and is expanding at a rate of 12%. Of this total the economy of the satellite industry the commercial satellite industry itself amounts to \$177 billion. It grew at a rate of 5% in 2011. ¹⁵

Commercial space business promises to become an even greater part of the global economy in the future. As the market place increases, its composition changes. The current large operators like Intelsat and SES will continue to grow. Euroconsult forcasts to 2021 ascertained that 2011 was a profitable year for the fixed satellite service operators. They experienced a 4% growth in transponder capacity and a 33% increase in high throughput satellite capacity and a \$724 million rise in total capacity leasing revenue. There is noticeably increasing demand for capacity and competition in the emerging markets. Emerging market states attach national prestige to their satellite business activities. ¹⁶

The commercial space industry is highly leveraged and the stakes of investors are significant.

¹⁴ Bin Cheng, *Studies in Space Law* (Clarendon Press, 1997) at 489-90, states that the space law treaties "were drawn up primarily during the period when space activities were still very much in the exploratory stage and were thought to be capable of being undertaken for a long time to come by States".

¹⁵ State of the Satellite Industry Report, May 2012, issued by the Satellite Industry Association, <www.sia.org>.

¹⁶ Space News, July 2, 2012 at 12.

The commercial space business is inherently international.¹⁷ The industry establishes global and outer space communication links. Satellites provide television and radio entertainment. Remote sensing and imaging satellites bring comprehensive information about natural resources and assistance in natural disasters, meteorological satellites bring important information about weather patterns. It provides launch services. Space tourism is developing. Civilian uses of Global Navigation Satellite Systems (GNSS) is rapidly increasing. In addition to its economic impact, commercial space enterprise benefits education and improves society socially and culturally. It is a force in establishing peace and security in the world.

C Interphases of the Space Protocol with International Space Law

The focus of this paper will be on the context in which the Space Protocol is intended to function. The discussion will be about how the Protocol intersects with the existing four international space law treaties, the Outer Space Treaty, ¹⁸ the Search and Rescue Convention¹⁹ the Liability Convention²⁰, the Registration Convention, ²¹ and the 1979 Moon Agreement. ²² The discussion will include the legal instruments of the International Telecommunication Union (ITU). These are the treaty instruments specifically mentioned by the Space Protocol, Art XXXV, the provisions of which supercede any aspects of the Protocol that may conflict with them. The discussion in this paper is merely descriptive of the context provided by these treaty instruments. It is not exhaustive.

II The Outer Space Treaty

The Outer Space Treaty basically envisions that it is States that engage in outer space activities. The Outer Space Treaty, Art. I, gives States freedom to access outer space "without discrimination of an kind, on a basis of equality and in accordance with international law."²³

Non-governmental entities gain access to outer space under the legal umbrella of their States. States cannot claim sovereignty over outer space. They cannot appropriate outer space by any means whatsoever.²⁴ Non-governmental entities exist in outer space only by the authority of their States of registry.²⁵

¹⁷ For example Sea Launch, SES, and INTELSAT.

¹⁸ Supra n. 1. The Treaty has 101 ratification.

¹⁹ Supra n. 12.

²⁰ Id.

²¹ *Id.*

²² Id. This Treaty has only 14 ratifications.

²³ Supra n. 12.

²⁴ Outer Space Treaty supra n. 12, Art II.

²⁵ IISL Board Statements, <www.IISLweb.org>.

The Outer Space Treaty Art. VIII is most meaningful for the purpose of this discussion. States exercise jurisdiction and control over space objects in outer space. Exercise of jurisdiction becomes important whenever a financier seeks to enforce a security agreement by court action or by means short of judicial action. Art VIII states that "(a) State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object..."²⁶ Significantly, "(o)wnership of objects launched into outer space...is not affected by their presence in outer space..." This language in Art. VIII is carried out and enforced by Art VI which makes clear that "(t)he drafters intended only one state to authorize and supervise and therefore be responsible for a particular private space activity;" because the States Parties must assure that "national activities are carried out in conformity with the provisions set forth in the present Treaty" Thus, "(t)he activities of the non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate state party to the Treaty."28

Financiers who seek to gain control over delinquent assets also have to consider that ownership and control may involve the financier's State in environmental responsibilities for delinquent space objects. The Outer Space Treaty, Art. IX, requires States to environmental effects and may require that state to enter into consultations. The Space Debris Mitigation Guidelines²⁹ may also become relevant.

The State of a financier seeking enforcement of a delinquent security agreement may also be expected to report hazards and other events to the United Nations and to other States pursuant to the Outer Space Treaty, Art. V, and also under the reporting requirement of any of the other space law treaties.

III Search and Rescue Agreement³⁰

This Agreement requires that space objects, including their component parts, be returned to the launching State, which is not necessarily the owner's (that is, the financier's) State.³¹ The Agreement is protective of the rights of the launching State.

States cannot abandon space objects in outer space, because the Outer Space Treaty, Art. VIII, establishes that ownership of objects is not affected by or changed by being launched into outer space. This basic rule affects the

²⁶ Lyall and Larsen, supra n. 13, at 469.

²⁷ Outer Space Treaty, supra n. 12, Art.VI.

²⁸ Id.

²⁹ UNGA Res, 62/217 (2007).

³⁰ Supra n. 12.

³¹ Search and Rescue Agreement, supra n. 12, Art. 5.

disposition of dead satellites, space debris and many other objects in outer space. It also places much responsibility on the State of registry.³²

It may be unlikely that a commercial satellite gets lost, then is found and has to be returned to the State of registry. Nevertheless, the Rescue and Return Agreement requires that it be returned to the launching State. It is very possible that a satellite, which is financed by a security agreement, is either placed in a wrong and useless orbit; or it is placed in a gravevard orbit after its useful life. In one instance an Indonesian satellite, Palaba B, was stuck in a low useless orbit without ability to move to its proper orbit. The owner transfered its right to the satellite to the insurance company which had insured its success and had paid for the loss. That insurance company employed the US space shuttle to retrieve and bring the satellite back to Earth. The satellite was subsequently returned avoid harmful contamination and other adverse to the manufacturer and later launched successfully by another company.³³ This example illustrates that the return issue is real. It also illustrates the launching State's legal right of return. That legal right is also established by the Outer Space Treaty, Art V. In the Context of the Space Protocol, the point is that the space object will not be returned to the financier if the financier's State is not a launching State.

A more likely issue of concern for the financier's State which qualifies as a launching State is that it could be responsible for the cost of removal of hazardous and deleterious fragments of a satellite that has crashed into the Earth. The Search and Rescue Convention, Art V, provides that the 'launching authority', (that is the launching State) upon request of a contracting State, "shall immediately take effective steps under the direction and control of the said Contracting Party, to eliminate possible danger of harm." ³⁴

IV The Liability Convention³⁵

The Liability Convention has a de-limiting influence on the functioning of the Space Protocol. In particular it may impede the ability of the financier to repossess space objects, including its component parts, that the financier has financed but on which the operator has defaulted. Under the Liability Convention the launching State is liable to other States for damages caused by space objects, including the space objects of nongovernmental entities.³⁶ If a financier, in the

³² See Lyall and Larsen, *supra* n. 13, at 67 stating that "(a) space object cannot be abandoned to become a *res nullius*."

³³ Id. at 102.

³⁴ Search and Rescue Agreement, *supra* n.12, Art V. An example would be the Cosmos 954. collision with Earth, see Lyall and Larsen, *supra* n. 13, at 117.

³⁵ Supra n. 12.

³⁶ Note that under the Outer Space Treaty, *supra* n. 12, Art VI, States Parties are responsible for both governmental and non-governmental activities in outer space and must specially authorize and continuously supervise the outer space activities of non-governmental entities.

event of default by the operator, seeks to recover title to the delinquent space object, the State of the financier will assume the risk of liability for the space object.³⁷ If the transferee State is willing to assume the risk of iability, a transfer can be accomplished by a bilateral agreement between the transferor and the transferee State. However, under the Liability Convention the original launching State always remains ultimately liable because the Convention itself does not relieve that State from ultimate liability.

Because transfers of responsibility for liability occur through change in registration under the Registration Convention, this discussion is also relevant to the Registratio Convention, as well as the Search and Rescue Agreement. Several cases of well known successful and attempted but incomplete transfers

exist:

- (1) When the UK transferred Hong Kong to China, the UK and China agreed to transfer Asia Sat I and 2 and Apstar 1 and 1A to Chinese registry under the Registration Convention. This transfer had the consequence that China assumed responsibility for these satellites not only pursuant to the Registration Convention, but also under the Liability Convention and the Search and Rescue Agreement.³⁸
- (2) When Iridium, a US company, contracted with China for launch of its satellites by China, that country agreed to register the launched satellites in China. That resulted in an ambiguity because Iridium, a US private company, controlled the access code to satellites in outer space, whereas the responsible State, China, had no control. In case of default by Iridium from whom could the financier seek assistance to gain possession?³⁹
- (3) When New Skies was spun off by Intelsat and became incorporated as a separate company in the Netherlands, that country was asked to accept transfer of the New Skies satellites to Dutch registry under the Registration Convention and accept responsibility under the Liability Convention and the Search and Rescue Agreement, but the Netherlands refused to do so. 40 This is a caution to an investor who may be in a similar situation example when seeking to obtain title to delinquent space object. The Dutch company, New Skies, controlled the satellites, but the transferor State was left without control over satellites for which it could be held responsible. It not only left the States concerned in a difficult situation. It also left the financier in an uncertain situation. In fact such a difficult situation could and probably would dissuade a financier from seeking to obtain title to the delinquent satellites. Instead the financier would likely resort to other remedies such as continued operation of the satellites under the aegis and

³⁷ The financier may be doing business in a different State in which case that State would assume the risk of liability under the Liability Convention.

³⁸ Lyall and Larsen, supra n. 13, at 93.

³⁹ See comment by Aoki, In Search of the Current Legal Status of the Registration of Space Objects, 2010 IISL Proc. at 255.

⁴⁰ See Lyall and Larsen, supra n. 13, at 92.

responsibility of the existing States, in other words, the financier may have to continue registration in the State of the delinquent debtor.⁴¹

(4) Yet another case exists in which the UK, much like the Netherlands in the New Skies case, declined to become the responsible State when Inmarsat became privatized. 42

These cases illustrate the reluctance of States to become liable under the Liability Convention. The financier cannot rely on the assistance of State courts to retrieve delinquent space objects. Is this a major weakness of the Space Protocol that should dissuade States from ratification of the Protocol? Probably not, because the financiers currently operate within the limitations described in these four cases. They know that they are subject to existing public law, that is, the space law treaties. ⁴³ The Space Protocol will not change that established legal principle. They have not lost any rights that they had previously.

One danger does exist in the current reluctance to assume responsibility under the three treaties. The financier may be tempted to establish business in socalled flag of convenience States, which will readily accept jurisdiction, but which can only exercise weak operational oversight over space objects and which are literally judgment proof. Such States may assume responsibility and liability under the three treaties, but on default of treaty obligations, fail to perform or pay damages. That would be an unfortunate consequence. Such attempts could create operation difficulties, because the major spacefaring States also have the most lucrative markets or pools of business. If businesses are denied access to these important markets, their satellites are worthless.

V The Registration Convention⁴⁵

The Registration Convention may be viewed as an implementation of the Outer Space Treaty, Art VIII, provision recognizing that the State of registry has jurisdiction and control over their objects in outer space. State jurisdiction and control of non-governmental space objects, including their components, is important because of the wide acceptance that the Outer Space Treaty has. Whereas the Outer Space Treaty, Art. VIII. is so universally adopted by 101 States including all the major spacefaring State so that it may express customary international law, the Registration Convention has been adopted by only 65 States. That may seem strange because the number of States launching space objects is rapidly increasing. However, it is not possible to equate application of the two treaties. Many States are only subject to the exercise of jurisdiction and control under the Outer Space Treaty. This fact influences the significance of the Registration Convention, Art. II.

⁴¹ See comment *infra* at 9 on choice of law clauses.

⁴² See Aoki, supra n. 39.

⁴³ See Space Protocol, supra n. 5, Art. XXXV.

⁴⁴ Lyall and Larsen, supra n. 13, at 469.

⁴⁵ Supra n. 12.

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The Registration Convention, Art II, adds to the Outer Space Treaty, Art VIII, that

Where there are two or more launching States in respect of any such space object, they shall jointly determine which one of them shall register the object in accordance with Art 1 of this Article, bearing in mind the provisions of article VIII of the [Outer Space Treaty], and without prejudice to appropriate agreements concluded or to be concluded among the launching States on jurisdiction and control over the space object and over any personnel thereof.

One reason for Art II is that the Registration Convention, Art I introduces a broader definition of launching State as meaning a State which launches or procures the launch as well as a "state from whose territory or facility a space object is launched." That requires all the States that qualify under the Convention as launching States to agree on which of them shall register because only one State can register and thus become the State responsible for oversight required by the Outer Space Treaty, Art VI. The International Space Station(ISS) is an example of how launching States can enter into special agreement on jurisdiction and control of space objects. 46 Each ISS module is subject to different national laws depending on which nation exercises jurisdiction over that module. It is important that "jurisdiction and control" in terms of the Outer Space Treaty Art. VIII be with the State of the operator so that the authorization and continuing oversight required by Art VI be exercised by that State. That would also benefit financiers seeking to secure possession of the delinquent space objects that they have financed. Failure to do so handicaps the operation of the Space Protocol as illustrated by the previously described cases in which countries declined to accept responsibilities under the Registration, Liability and Search and Rescue treaties. ⁴⁷ "The national State of the owner of a satellite should carry the satellite on a domestic registry and show up as such in the OOSA registry."48 That is also the intended purpose of UNGA Resolution 62/101 Recommendations on Enhancing the Practice of States and International Governmental Organizations in Registering Space Objects (2007).

VI The Moon Agreement⁴⁹ – Relevance?

The 1979 Moon Agreement has only been adopted by 14 States. It is not binding for the vast majority of spacefaring States. Nevertheless, it would affect the operation and functioning of the Space Protocol for those states that are bound by the Moon Agreement. Furthermore, in the many areas where the Moon

⁴⁶ International Space Station Agreement, T.I.A.S. 12927.

⁴⁷ Successful as well as frustrated attempts by States to transfer their responsibilities under the Registration Convention were discussed above, *supra* n. 38–42.

⁴⁸ Lyall and Larsen, *supra n*. 13, at 93.

⁴⁹ Supra n. 12.

Agreement and the Outer Space Agreement coincide, the Space Protocol would be affected.

The Space Protocol, by definition, applies to "outer space, including the Moon and other celestial bodies;" The Protocol's broad definition of space assets, subject to the Space Protocol, could include manmade identifiable lunar objects such as space modules and space capsules. The Protocol could also apply to payloads such as a space rover on Mars. To the extent these space assets are classified as international interests and subject to a security agreement, they can be subject to the Protocol. Thus the Moon Agreement is relevant, and it is included within the scope of the Space Protocol, Art. XXXV.

VII The ITU Legal Instruments⁵¹

The Space Protocol, Art. XXXV, specifically stipulates that the Protocol shall not affect the rights and obligation of States under the ITU legal instruments. Operation of satellites in outer space requires use of radio frequencies and orbital slots to keep them on course. Extraneous radio interference can significantly adversely affect the value of space assets significantly. Thus radiofrequencies and orbital slots are regulated by the ITU. Furthermore, the ITU Constitution Art. 44(2) mandates that radio frequencies and orbital slots are "limited natural resources and that they are to be used rationally, efficiently and economically, in conformity with the Radio Regulations" The ITU also gives the Member States priority rights to use radiofrequencies in emergencies. 52 While the ITU has jurisdiction of the use over outer space by commercial satellites, the ITU largely leaves enforcement to the Member States. While the ITU public law legal instruments will supercede private law activities, the Protocol's Art. XXXV carries out this basic legal principle.

VIII Choice of Law Issues

The Space Protocol, Art XLI(2)(a) stipulates that the States Parties may opt out of the right of contracting parties to choose the applicable law. If they opt out, then the parties are subject to the domestic law applicable to the security agreement by the private international law of the forum state.⁵³

⁵⁰ Space Protocol, *supra* n. 5, Art 1.

⁵¹ Supra n. 12.

⁵² See Lyall and Larsen, Treatise, Chapter 8 Radio and the International Telecommunicatio Union, *supra* n. 13, at 199.

⁵³ See Sir Roy Goode, Official Commentary on International Interests in Mobile Equipment and Protocol Thereto on Matter Specific to Aircraft Equipment supra n. 1 at 20.

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If they do not opt out then Art VIII stipulates:54

The parties to an agreement, a contract of sale, a rights assignment or rights reassignment or a related guarantee contract or subordination agreement may agree on the law which is to govern their contractual rights and obligations, wholly or in part.

If the parties to a security agreement select the law of a certain States, that means "the domestic law of the designated State, excluding its conflict of law rules." ⁵⁵

To what extent can the financier and the debtor manipulate the applicable treaty by choosing the applicable law in their security agreement? This issue is particularly important for the financier who wants maximum protection in case of default by the debtor. For example it would be in the financier's interest to select the law of a State that will accept full responsibility under the space law treaties in order for the financier to avoid the problem created by the Dutch refusal to accept their full responsibility under the Registration, Liability and Search and Rescue Conventions. ⁵⁶ Choice of law could be important to accomplish that purpose.

IX Conclusion

This modest look of the Space Protocol from the point of its compatibility with existing space law may be characterized as the outside view. It was this author's role on the early Space Protocol aerospace industry working group, chaired by Peter Nesgos, to objectively review the group's work on the draft protocol. The view may be contrasted with the inside view of the Protocol from the commercial law point of view currently being developed by Sir Roy Goode, who is writing an extensive commentary on the Space Protocol like the one he wrote on the Aviation and Rail Protocols. Roy's commentary will describe how the parties can contract within those limitations. I think both the outside and the inside perspectives are necessary. The parties to a security agreement on space assets need to know all the outside limitations on the parties' ability to contract. Are the two views in conflicts? The two views are basically compatible if we keep in mind the basic principle that public law always supercedes private law. It will be the space lawyers' role to advise their clients of the Protocol's limitations as well as how it operates. Whether the Protocol will

⁵⁴ Space Protocol, supra n. 5, Art VIII.

⁵⁵ Sir Roy Goode, *supra* n. 53, at 317.

⁵⁶ See previous discussion of exemplary cases, supra n. 38-42.

⁵⁷ See Larsen and Heilbock, supra n. 4.

⁵⁸ Supra n. 12. Sir Roy was tasked by the Berlin Diplomatic Conference to draft a commentary on the Space Protocol. The draft is currently being circulated by Unidroit for comment.

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be to the advantage or disadvantage of the space industry remains to be seen. Advocates of the Space Protocol point to the success of the popular Aviation Protocol. Major commercial satellite operators are unconvinced of the need for the Protocol. Advocates, however, think the Space Protocol will be a valuable tool for small satellite operators and for market entry of the emerging States and that it will make the industry more competitive.