

Revisiting the 1975 Registration Convention: Time for Revision?

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I. INTRODUCTION

One important step in the work of the Legal Sub-Committee of the Committee on the Peaceful Use of Outer Space (C.O.P.U.O.S.) was successfully finalised in 1975. The U.N. General Assembly adopted the Convention on Registration of Objects Launched into Outer Space (Registration Convention),¹ which contains detailed rules on the registration of space objects launched into outer space.² The establishment of the registration requirement basically serves two functions as identified by Diederiks-Verschoor: “(1) a well-ordered, complete and informative register would minimise the likelihood and even the suspicion of weapons of mass destruction being furtively put into orbit; and (2) it is not possible to identify a spacecraft that has caused damage without an international system of registration.”³

The Registration Convention, consisting of 12 Articles, supplements Article VIII of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (the “Space Treaty”).⁴ The Convention provides

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¹ Opened for signature on 14 January 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15 (entered into force 15 September 1975).

² See Preamble of the Registration Convention.

³ I. H. Ph. Diederiks-Verschoor, *An Introduction to Space Law* (1999), at 47.

⁴ Article VIII of the Outer Space Treaty provides that a State on whose registry an object launched into outer 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.

administrative arrangements for States to register all objects, either launched from their territory, or whose launch they have procured and report the existence of this registry and contents to the Secretary General of the United Nations.⁵ The Registry was established to create a central depository of all objects launched into space to facilitate the enforcement of other space treaties.⁶ Accordingly, as an important international document, the Convention is not merely an attempt to resolve questions of public international law, rather it is an international effort to produce an international codification of administrative legal doctrine.

Since the Convention has existed for almost 30 years without many problems, its applicability is assured. According to Article X of the Convention, the question of the review of the Convention is included in the provisional agenda of the United National General Assembly in order to consider the necessity of revision.⁷ In 1986, ten years after the implementation of the Convention, the Assembly decided that there was no such need.⁸

Nevertheless, with more and more space activities taking place on a daily basis, along with the trend of commercialisation, severe challenges have been set on the continuing application of the Convention. Particular concerns arise because of the privatisation of space activities. It is now time to carry out a serious review of the Convention taking into account the development of space activities. Furthermore, as identified by some

⁵ Registration Convention, Article II and III.

⁶ See Preamble of the Registration Convention.

⁷ Registration Convention, Article X provides, "Ten years after the entry into force of this Convention, the question of the review of the Convention shall be included in the provisional agenda of the United Nations General Assembly in order to consider, in the light of past application of the Convention, whether it requires revision. However, at any time after the Convention has been in force for five years, at the request of one third of the States Parties to the Convention and with the concurrence of the majority of the States Parties, a conference of the States Parties shall be convened to review this Convention. Such review shall take into account in particular any relevant technological developments, including those relating to the identification of space objects."

⁸ Michel Bourely, "Is it Necessary to Re-Negotiate the Convention on Registration?" (1988) 30 Proc. Coll. L. Outer Sp., at 231.

scholars, the Convention entails several drawbacks.⁹ As stated in Article X of the Convention, at the request of one third of the States Parties to the Convention and with the concurrence of the majority of the States Parties, a conference of the States Parties shall be convened to review the Convention at any time after the Convention has been in force for five years.¹⁰

This article will take on this challenging task and identify several areas for possible revision. Part 2 discusses the application of three terms in the Registration Convention and possible improvements in defining the three terms. Part 3 assesses the regulatory regime created by the Registration Convention and makes recommendations for reform. Part 4 concludes that revision is necessitated by new developments in commercial space activities and changing attitudes among the space practitioners.

II. CLARIFICATION OF CERTAIN CONCEPTIONS

Similar to the Convention on International Liability for Damage Caused by Space Objects (the “Liability Convention”)¹¹, the Registration Convention starts by defining several important terms: “launching State”, “space object” and “State of registry”. Clearly, these terms require explanations that are more thorough and thus are areas of the Convention that are now regarded as unsatisfactory.

A. Launching State

The definition of “launching State” is a difficult issue. A launching state, as defined in the Registration Convention, includes four categories: (a) a state that launches a space object; (b) a state that procures the launch of a space object; (c) a state from whose territory a space object is launched; (d)

⁹ See e.g., Nandasiri Jasentuliyana (ed.), “Maintaining Outer Space for Peaceful Uses” (1984) Proceedings of a Symposium held at The Hague, at 111-120; Arnel Kerrest, “Commercial Use of Space: Remarks on Some Legal Issues” (2004) Proceedings of 2004 Space Law Conference held in Beijing, at 205; Diederiks-Verschoor, above n. 3, at 47-50; Peter van Fenema, “The Registration Convention” (2002) Proceedings of the United Nations Workshop on Capacity Building in Space Law, 33.

¹⁰ Registration Convention, Article X.

¹¹ March 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187.

a state from whose facility a space object is launched.¹² According to many scholars, it is one of the major impediments to the development of commercial space activities.¹³ An appropriate definition of “launching State” is vital to the determination of State liability for national activities under the Space Treaty and the Liability Convention.¹⁴

Problems arising out of the definition may include a proper understanding of a procuring State; the application of Article VIII of the Space Treaty; the determination of a launching State in case of transfer of ownership and the relationship between a private entity and a State. The current definition is criticised for failing to answer the new issues arising out of commercialisation and privatisation of space activities. While commercialisation is an inevitable trend in outer space, we must urgently clarify the concept of “launching State”.

One working group of the Legal Subcommittee of the C.O.P.U.O.S. presented its deliberations in 2002, offering the first result of intergovernmental discussions on this issue.¹⁵ It is expected that the working group, with the mandate of dealing with the wide topic of the status and application of the five United Nations Treaties on Outer Space, will continue its work on the review of the launching State issue in light of the most recent experiences, State practice and doctrine, on the basis of the general understanding that the existing space treaties do not require amendment.¹⁶

¹² Article I of the Registration Convention provides that the term “launching State” means (i) a State which launches or procures the launching of a space object; (ii) a State from whose territory or facility a space object is launched.

¹³ See for example, Karl-Heinz Bockstiegel, “The Term ‘Launching State’ in International Space Law” (1994) 36 Proc. Coll. L. Outer Sp. 80-83.

¹⁴ *Ibid.*

¹⁵ For the recent C.O.P.U.O.S. work on the concept of “launching State”, see Kai-Uwe Schrogl and C. Davies, “A New Look at the ‘Launching State’: The Results of the U.N.C.O.P.U.O.S. Legal Subcommittee Working Group - Review of the Concept of the ‘Launching State’ 2000-2002 (2002) 44 Proc. Coll. L. Outer Sp. 286-301.

¹⁶ See *United Nations Treaties on Outer Space: Actions at the National Level* (2004) United Nations / Republic of Korea Workshop on Space Law, 137-139.

1. *Transfer of Ownership (Non-Launching State)*

The practice of transferring ownership of satellites is not particularly significant. References can be made to the transferring of AsiaSat 1 from the United Kingdom register to the Chinese register during the sovereignty transfer of Hong Kong to China.¹⁷ In this case, there should be no problem since China, as the place for the original launching, is a launching State.¹⁸

However, problems will arise when a satellite is sold to a State that is not an original launching State, as defined by the Registration Convention. The new State, while not a launching State, will not bear any liability according to the Liability Convention, which states that only launching States will bear liability. This is obviously unfair. In general, the space object is under the new State's jurisdiction and control, but this new State will not bear any liability under the Liability Convention for damages caused by the space object simply because it is not an original launching State. Those original launching States are liable for damages that they cannot foresee and prevent. It is possible that relevant States will conclude bilateral / multilateral agreements requiring "the new State" to indemnify the original launching State(s) for any damages caused after the transfer. However, when referring to the Liability Convention, fault liability for damages caused in outer space is based on the fault of the launching States collectively; a State sustaining damage may seek compensation from any original launching States.¹⁹

The above agreements, while offering indirect solutions, make the issue complicated; the new State needs to locate each and every original State,

¹⁷ Another recent example was the acquisition of Optus by SingTel in 2001. See Mark Westfield, "Singtel was Sold an Optus Pup", *The Australian*, 19 November 2004 <<http://www.sfdonline.org/Link%20Pages/Link%20Folders/02Pf/aus220102.html>>. Other examples include the purchase of satellites by NewSkies Satellites, a Dutch company and the registration of the privatized Inmarsat Limited, now a British company, see U.N.Doc. A/AC.105/806 (22 August 2003) and U.N.Doc. ST/SG/Ser.E/417 (25 September 2002).

¹⁸ U.N.Doc. ST/SG/SER.E/333 of 3 April 1988; and U.N. Doc. ST/SG/SER.E/334 of 3 April 1998.

¹⁹ Liability Convention, Art. V.

negotiate and reach agreements.²⁰ Such a solution increases the plurality of control that will be detrimental to the efficacy of the Convention. To resolve this problem, the meaning of “launching State” could be extended so that it does not refer exclusively to an original launching State. Without prejudice to the right of a State sustaining damage, “launching State”, for the purpose of registration, may further refer to the State having “jurisdiction and control”. This extensive explanation actually reflects the U.S. proposal to C.O.P.U.O.S. in that: the U.S. register every space object according to the nationality of the company; and the U.S. only register space objects of American companies.²¹ Further determination of other possible launching States can be identified in the term “State of Registry”, which is discussed in Part II(c).

2. *Involvement of Private Entities*

Private entities, including international organisations and multinational corporations, are becoming increasingly involved in the launching activities. As far as an international organisation is concerned, this will be easy since the organisation represents all the States concerned. Such organisations can declare their acceptance of the rights and obligations provided in the Convention. If no declaration is made, constituent documents may need to be checked to try to find out their legal personality in certain circumstances.

In fact, even if the organisation has the capacity to act as a virtual State of registry, it will never have the capacity to exercise true jurisdiction, since that is a typical and very fundamental prerogative of a sovereign State.²² Accordingly, under the circumstance described above, legal ownership of the organisations does not automatically lead to “jurisdiction and control”. It is the individual member States, not the organisations *per se*, that exercise jurisdiction and control over the space objects.

²⁰ The satellite builder, the launch service provider and the satellite operator in a typical “delivery in orbit” arrangement may each come from different countries. See U.N. Secretariat, “Review of the Concept of the ‘Launching State’ - Report of the Secretariat” (2002) U.N. Doc. A/AC.105/768 of 21 January 2002, at para. 48.

²¹ Armel Kerrest, “Commercial Use of Space, including Launching” (2004) Proceedings of Space Law Conference 2004: Asia: a Regional Force in Space, at 205-206.

²² Frans G. von der Dunk, “The Illogical Link: Launching, Liability and Leasing” (1993) 35 Proc. Coll. L. Outer Sp. 351.

When other private parties are involved, the situation becomes more complicated. States are not necessarily aware of the detailed operations. Thus, is it still reasonable to subject a State, instead of the private entity directly involved in the operation, to possible liability? In a private launching activity where States cannot control the operations, is it still appropriate to restrict liability only to States?

It seems that retaining the existing system, which provided that launching States should be responsible for all space objects, commercial or government, launched into space, is reasonable.²³ They are liable because of the national registration system for private entities. A corporation needs to be registered in a State, which will examine the legality of the entity and issue approval for its future operations. The activities of corporations are subject to the State's supervision. As far as the issue of flags of convenience is concerned, the State, by relaxing the registration and supervision of the corporations, should take the risk of possible liability.

Therefore, to prevent unnecessary liability, the State should strengthen its registration system and issue an appropriate permit. As provided by some national legislation, States should always maintain a register of space objects, no matter if they are launched or procured by the Government or private entities.²⁴ One potential approach as recommended by the working group of C.O.P.U.O.S. is to implement national laws to authorise and provide continuing supervision of the activities of their nationals in outer space.²⁵ Accordingly, States should act in good faith²⁶ when passing national laws on the issues of authorisation, supervision and licensing of private enterprises to operate launch services and to ensure the availability of a just compensation to avoid international obligations

²³ D. L. Willson, "An Army View of Neutrality in Space: Legal Options for Space Negation" (2001) 50 A. F. L. Rev. 191.

²⁴ See for example, *Hong Kong Outer Space Ordinance* (Cap. 523), s. 9 provides that the Chief Executive shall maintain a register of space objects.

²⁵ Conclusion of the Working Group on agenda item 9, entitled "Review of the concept of the 'launching State'" as contained in the Report of the Legal Subcommittee on its forty-first session, held in Vienna from 2 to 12 April 2002, U.N. Doc. A/AC.105/787 of 19 April 2002, Annex IV, Appendix, s. 10.

²⁶ National legal regime should offer detailed rules implementing the obligations provided in relevant international treaties.

becoming a dead letter.²⁷ The same should also apply to non-governmental organisations so that the State of registration of the organisation should also be the State that is responsible.

3. *Understanding of "Procurement"*

Quite a lot of discussions have taken place on the issue of "a State procuring the launching". It is obvious from the wording of the Convention that a distinction was made between the "act of launch" and the "procurement of a launch". It is also evident from this term that a procuring State is acting on behalf of outside entities that actively initiate the launch of a space object. It has been suggested that a State has to be somehow actively involved by requesting, or at least promoting the launching of a particular space object in order to consider it as having "procured" the launching.²⁸ The sole action of providing a space object *per se* will not satisfy "procurement"; the procurement requires active and substantial participation in launching activities.²⁹ Accordingly, in an increasingly interrelated scientific and technological society, where a finished product is often the result of many components manufactured globally, there is a substantial need to know what is to be identified as a procurement and the circumstances upon which legal liability may be assessed.³⁰

Considering the sheer number of States which might be involved in the launching, from the production of space objects to the final registration, it has been further suggested that an "active and substantial participation" in the launch be present in order for a State to be considered as one of the

²⁷ Maureen Williams, "Perceptions on the Definition of a 'Launching State' and Space Debris Risks" (2002) 44 Proc. Coll. L. Outer Sp. 285.

²⁸ Karl-Heinz Böckstiegel, "The Terms 'Appropriate State' and 'Launching State' in the Space Treaties — Indicators of State Responsibility and Liability for State and Private Space Activities" (1992) 34 Proc. Coll. L. Outer Sp. 15.

²⁹ Edward Frankle and Jason Steptoe, "Legal Considerations Affecting Commercial Space Launches from International Territory" (2000) Proceedings of the Workshop on Legal Framework for Commercial Launch and Associated Activities, January 2000 in Bremen, Germany, at 67; and Peter Nesgos, "International and Domestic Law Applicable to Commercial Launch Vehicle Transportation" (1984) 27 Proc. Coll. L. Outer Sp. 102.

³⁰ Carl Q. Christol, "Nuclear Power Sources for Space Objects: A New Challenge for International Law" (1993) 35 Proc. Coll. L. Outer Sp. 250.

launching States.³¹ Doubtlessly, the term “procurement” should entail the elements identified by the statement above for “launching State”: a procuring State is itself a launching State. Accordingly, “procurement” also requires actual control over the launch or the payload in orbit.³²

4. *Application of Article VIII of the Space Treaty*

By acknowledging the difficulty in defining the “launching State”, it has been suggested that non-launching States can make use of Article VIII of the Space Treaty.³³ This suggestion, while trying to accommodate the needs of bringing non-launching States to the liability regime, is in contradiction with the general legal practice.

Article VIII of the Space Treaty provides, “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, and over any personnel thereof, while in outer space or on a celestial body.” It has been widely recognised that the Registration Convention is a further elaboration of Article VIII of the Space Treaty and the purpose of the Registration Convention is to clarify and consolidate this Article.³⁴ In this way, the Registration Convention is a specific regulation, and the Space Treaty (considered as constitution for outer space) is general law. According to the principle of jurisprudence, once there is conflict between general law and specific law,

³¹ Armel Kerrest, “Remarks on the Notion of Launching State” (1999) 41 Proc. Coll. L. Outer Sp. 310.

³² William B. Wirin, “Practical Implications of Launching State — Appropriate State Definition” (1994) Proc. Coll. L. Outer Sp. 113.

³³ Ricky J. Lee, “Commentary Paper on Discussion Paper Titled “Commercial Use of Space, Including Launching” (2004) Proceedings of Space Law Conference 2004: Asia: a Regional Force in Space, 230-231.

³⁴ Fred Kosmo, “The Commercialization of Space: A Regulatory Scheme that Promotes Commercial Ventures and International Responsibility” (1988) 61 S. Ca. L. Rev. 1069.

specific law prevails. Only when the subject matter is outside the scope of specific law, will the general law be considered.³⁵

The emergence of non-launching States results from the practice of transferring the ownership of space objects, which did not exist during the drafting of the Registration Convention. The Convention specifically identified the scope of launching States, but has now obviously fallen behind the present practice. The task for the time being is to make modifications to the present Convention, without returning to the Space Treaty, which consists only of principles for further clarification. It is easy for the Space Treaty, with general principles to act as panacea; however, this will forestall the development of space law. Loopholes always exist in laws no matter how well they have been elaborated. The point is to improve the existing rules to enhance the effectiveness of this mechanism.

B. Space Object

It has been pointed out that the definition of “space object” is neither clear nor satisfactory.³⁶ For instance, do the space objects entailed in the Convention include those launched in outer space? There is no consensus on whether a spacecraft or satellite constructed or launched in outer space falls within the definition of “space object”.³⁷ It is evident that the location of the launching activities does not change the nature of the space object. Territorial connection only has relevance when defining launching States from whose territory space objects are launched. This

³⁵ See further *Amoco Int'l. Fin. Corp. v. Iran* (1987) 15 Iran-U.S. Claims Tribunal Rep. 189: “As a *lex specialis* in the relations between the two countries, the Treaty supersedes the *lex generalis*, namely customary international law....However, ...the rules of customary law may be useful in order to fill in possible lacunae of the law of the Treaty, to ascertain the meaning of undefined terms in its text or, more generally, to aid interpretation and implementation of its provisions.”

³⁶ Diederiks-Verschoor, above n. 3, at 47; and Stephen Gorove, “Definitional Issues Pertaining to ‘Space Object’” (1994) 37 Proc. Coll. L. Outer Sp. 88; and Bin Cheng, “‘Space Objects’, ‘Astronauts’ and Related Expressions” (1991) 34 Proc. Coll. L. Outer Sp. 17.

³⁷ Vladimir Kopal, “Some Remarks on Issues Relating to Legal Definitions of ‘Space Object’, ‘Space Debris’ and ‘Astronaut’” (1994) American Institute of Aeronautics and Astronautics 1; and Karl-Heinz Bockstiegel, “The Terms ‘Appropriate State’ and ‘Launching State’ in the Space Treaties: Indications of State Responsibility and Liability for State and Private Space Activities” (1992) 35 Proc. Coll. L. Outer Sp. 15.

can happen in the high seas, the Antarctic, as well as in outer space where no State can claim sovereignty. The identification of such objects can be more difficult than those launched from a territory, but registration can be a solution.

Further, the Convention provides that States must notify the U.N. Secretary General of objects that are no longer in space;³⁸ however, the status of space debris is not identified.³⁹ Will the original launching States continue to be liable for damages caused by space debris from the original space object? If this space debris can be identified, then the issue is easily resolved. Once a space object ceases operation, the original launching States should take some measures to prevent future damage.⁴⁰ In case damage does occur, these States should continue to be liable. Furthermore, the original launching States should have more knowledge and the necessary technology to alleviate the damage. Conceivably ongoing liability should make the original States more cautious while initiating an original launch.

However, what happens when the space object cannot be identified? Of course, it is difficult to determine the claims and measure the damage.⁴¹ It appears that the drafters of the Convention failed to foresee this situation, believing that registry of objects will facilitate claims by identifying the origins of space objects.⁴² It is important to address this problem and possibly provide in the Convention some guidelines for claims when the

³⁸ Article IV(3) of the Registration Convention provides that each State of registry shall notify the Secretary-General of the United Nations ... of space objects concerning ... which have been but no longer are in Earth orbit. See further Glenn H. Reynolds and R. P. Merges, *Outer Space: Problems of Law and Policy* (1989), at p. 195.

³⁹ C. D. Williams, "Space: The Cluttered Frontier" (1995) 60 *J. Air L. & Com.* 1148.

⁴⁰ The C.O.P.U.O.S. is the primary inter-governmental organization dedicated to resolving issues involving space debris. A number of programs have been proposed to remove existing space debris. For example, inactive payloads may be deorbited with the help of a space tether. See further R. C. Bird, "Procedural Challenges to Environmental Regulation of Space Debris" (2003) 40 *Am. Bus. L. J.* 644.

⁴¹ P. T. Limperis, "Orbital Debris and the Space-faring Nations: International Law Methods for Prevention and Reduction of Debris, and Liability Regimes for Damage Caused by Debris" (1998) 15 *Az. J. Int'l. Comp. L.* 338.

⁴² Williams, above n. 39, at 1163.

object causing the damages cannot be identified.⁴³ This issue will be elaborated later along with the information needed as part of the registration.

Another issue is what if a space object consists of component parts individually registered by different States? How do we identify the object as a whole? There are no obligatory guidelines available yet. The resolution of the problem relies on cooperation among the States. The launching States should agree beforehand the State of registry that registers the complete structure as a new space object in accordance with the Convention.⁴⁴ One good example is the construction of the International Space Station (I.S.S.): each Partner registers the I.S.S. elements it provides as space objects and retains jurisdiction and control over the elements it registers. This arrangement allows each Partner to treat the elements carried on its registry as an extension of its territory for jurisdictional purposes and ensures that its national laws can apply to elements and personnel it provides.⁴⁵ This arrangement shall be further discussed in the following part on cooperation among launching States.

C. State of Registry

This term can only be found in the Registration Convention. No other space treaties have made use of this term. For example, in the Liability Convention, the launching State(s), not the State of registry, is liable for damage. Many scholars have concluded that State of registry is the launching State or one of the launching States.⁴⁶ Therefore is the sole

⁴³ L. R. Roberts, "Orbital Debris: Another Pollution Problem for the International Legal Community" (1997) 11 Fl. J. Int'l. L. 622.

⁴⁴ A. Gorbil, "Large Space Structures: The Need for a Special Treaty Regulation" (1984) 26 Proc. Coll. L. Outer Sp. 247-250.

⁴⁵ André Farand, "Legal Environment for Exploitation of the International Space Station", Presentation to the International Symposium at Strasbourg, France, 26-28 May 1999, in G. Haskell & M. Rycroft (eds.), *International Space Station: The Next Market Place* (2000), at p. 141.

⁴⁶ See e.g., Bin Cheng, "Space Objects and their Various Connecting Factors", in G. L. Lafferranderie and D. Crowther (eds.), *Outlook on Space Law over the Next 30 Years* (1997) at 205; William B. Wirin, "Practical Implications of Launching State—Appropriate State Definitions" (1994) 37 Proc. Coll. L. Outer Sp. 109-113; and Schrogl and Davies, above n. 15, 286-301.

purpose of using the term "State of registry" simply to require that one State must register the space object? From the absence of the term in other treaties, we might conclude that the term does not help in regulating the status of space objects or the consequences of operating them. For this purpose, it is thus not necessary to identify nationality with the relevant registration, although in practice it happens that the State of registry automatically confers its nationality on a space object.⁴⁷

Nevertheless, this understanding can cause some problems. Does it mean that the State of registry is the one that has full control and jurisdiction over the space object? This might be true when the practice of selling space objects is uncommon. The launching States may agree upon the State of registry, which can exercise its jurisdiction and control over the object. Accordingly, an agreement will settle the issue of registry. However, the transfer of ownership of space objects to a State not being a "launching State" has become a reality, which means that a transfer of the power of control will take place. This brings about the ridiculous situation where the buyer, while not a launching State, is neither allowed to be the State of registry, nor takes on any liability under the Liability Convention.

While it is possible that launching States may claim compensation from the buyer after making reparations to a third party, surely it would be better to extend the State of registry to a State with full jurisdiction and control. This will bring the Convention in line with the new development. In the case of a non-original launching State, one solution that could be suggested is that the "State of registry" further refers to a State maintaining its jurisdiction and control over the said space object. Several elements can assist in determining "jurisdiction and control": direct commercial benefits from operation of the space object, the transfer agreement and the restriction of re-transfer.

III. AMBIGUITIES IN THE EXISTING REGISTRATION SYSTEM

The Convention provides the first step in formalising the registration system. Proposals for revision were submitted as early as 1984, but no measures have actually been taken. It is necessary to reiterate some

⁴⁷ Cheng, above n. 46, at 205.

identified shortcomings and offer further comments on the existing registration system.

A. Provision of Information

Article IV provides the requirements for registration identifying five items.⁴⁸ This provision is challenged by the use of nuclear power sources (N.P.S.). The risks inherent in using N.P.S. caused a debate amongst States. A Resolution was adopted concerning the safe use of N.P.S. in 1992 - the Principles Relevant to the Use of Nuclear Power in Outer Space. This Resolution provides that any State launching a space object with N.P.S. on board should in a timely fashion inform States concerned in case of malfunctioning of the space object with a risk of re-entry of radioactive materials to the Earth. Furthermore, the updated information should also be transmitted to the Secretary-General of the U.N.⁴⁹ As understood from a C.O.P.U.O.S. document;⁵⁰ the Registration Convention does not obligate any State to furnish information on the presence of N.P.S. on board space objects, although such information could be voluntarily given.⁵¹ Accordingly, one might think that the N.P.S. Principles bring additional rules to the Registration Convention, which, being of only recommendatory character, may not be considered to amend the legally binding treaty.⁵²

It is thus necessary to consider whether the information concerning the use of N.P.S. should be provided during the registration, as this question also applies to the information concerning the presence of arms systems on board space objects and the purpose and functioning of space objects. For example, the Convention provides that the "general function" of the space object needs to be disclosed. However, the term "general function"

⁴⁸ The five items are name of launching State or States; an appropriate designator of the space object or its registration number; date and territory or location of launch; basic orbital parameters, including nodal period, inclination, apogee, perigee; and general function of the space object.

⁴⁹ Principles Relevant to the Use of Nuclear Power Sources in Outer Space, Principle 5.

⁵⁰ See U.N. Doc. A/AC.105/430, 26 April 1989, at 17.

⁵¹ See for example, JoAnn C. Clayton, "Nuclear Power Sources for Outer Space: Political, Technical and Legal Considerations" (1989) 31 Proc. Coll. L. Outer Sp. 287.

⁵² M. Hoskova, "The Notification Principle in the 1992 NPS Resolution" (1993) 35 Proc. Coll. L. Outer Sp. 308-309.

is subject to various interpretations, allowing for the protection of the identity of military satellites, which perform an entirely legitimate function under the law.⁵³ Furthermore, while giving answers as to what objects are in outer space, the Convention fails to provide information on where the space objects can be found.⁵⁴

As identified above, the main problem emanating from the requirements of provisions of information lies in the unwillingness of States to disclose relevant information concerning its military purposes. Since no better way has been found so far, we should give it the benefit of the doubt. Nevertheless, the provision in the Convention should further reiterate the principle of peaceful use of outer space and be used as a safety valve in case of serious violations. Some might argue that the inclusion of additional requirements is not practicable in reality, but this inclusion can serve as a potential preventive force that can constantly remind the potential launching States of the obligation to peaceful means.

Another matter raised is the timing of the information. The term "as soon as practically possible" is used in the Convention.⁵⁵ This is a rather subjective criterion - launching States may and do interpret the term as weeks or months following the launch. Scholars have rightly criticised the ambiguity of the term.⁵⁶ A proposal has been put forward to impose a limit of two hours within which a report of a launch of a N.P.S. would have to be made to the U.N. Secretary-General and a limit of 24 hours for reporting other satellite launches.⁵⁷ This proposal might be too strict and therefore, flexibility should be allowed for legitimate reasons. Some other proposals have been less restrictive, requiring the change of the term to

⁵³ For example, protection of the "national technical means" (including space reconnaissance capabilities) under the Anti-Ballistic Missile (A.B.M.) Treaty between the U.S. and Russia is indispensable for an effective verification structure. For the A.B.M. Treaty to survive in its present form, the two parties must protect the secrecy of their space reconnaissance assets. See further R. A. Ramey, "Armed Conflict on the Frontier: The Law of War in Space" (2000) 48 A. F. L. Rev. 93.

⁵⁴ R. Moenter, "The International Space Station: Legal Framework and Current Status" (1999) 64 J. Air L. & Com. 1044.

⁵⁵ Article IV(1) provides, "Each State of registry shall furnish to the Secretary-General of the United Nations, as soon as practicable, the following information ..."

⁵⁶ Jasentuliyana, above n. 9, 117-120.

⁵⁷ Edward R. Finch, Jr., "Heavenly Junk II: Recent Developments in Space Debris" (1994) 8 Air & Space L. 9.

“the U.N. Secretary-General shall be informed promptly”.⁵⁸ Thus, it is necessary to take into account all those proposals and set an appropriate schedule for determining the timing of the information.

B. Enforcement Mechanism

Becoming a party means that the State needs to comply with the rules of the Convention, otherwise some measures might be imposed in case of violation.⁵⁹ It is without doubt that the Convention, as an important international treaty, obliges member States to fulfil the commitments contained in the document. This is the same with the Registration Convention as well as with all other space law Conventions.

However, the fact remains that space law treaties are generally weak in enforcement mechanisms. The present space treaties were drafted during the cold-war period when the two superpowers were the two main actors in space activities. The political tension had a direct impact on the law-making process, which became more difficult when it came to the issue of enforcement. At the time, in view of the urgent need of written documents guiding space activities, the States were rather glad to have finalised the space treaties in their present form.⁶⁰

This weak enforcement mechanism differs from the current treaties relating to the protection of intellectual property rights. Thanks to the W.T.O. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), strong enforcement and dispute settlement mechanisms are in place, which provide strong support to the enforcement of intellectual property rights.⁶¹ One may even consider space treaties as “quasi-soft law”. The term “quasi-soft law” differs from “soft law” in that the latter cannot be considered as “full-fledged” rules of international law. The space law treaties are indeed rules of international law. While not soft-law in the real sense, the lack of an enforcement mechanism can depreciate the value and effectiveness of the Conventions. “Grey areas” exist in their enforcement and compulsory nature, just as in “soft law”

⁵⁸ Jasentuliyana, above n. 9, 111-120.

⁵⁹ In international law, measures include reparation, compensation, reprisal, retortion.

⁶⁰ Lafferranderie, above n. 46, xvii.

⁶¹ A. H. Qureshi, *International Economic Law* (1999), at pp. 284-286.

where there exists a considerable “grey area” between the white space of law and the black territory of non-law.⁶² Accordingly, the performance of the obligations in the space law treaties rests based on good faith or voluntary compliance.

Consequently, some provisions might be added to describe in detail how enforcement should be handled, including the rules for provisional measures, injunctions, damages and other penalties. An appropriate body, perhaps C.O.P.U.O.S. or the U.N. Secretary-General, should have the right, under certain conditions, to order the obligatory registration of certain objects and provision of certain information (for example, in launching a space object with N.P.S. on board).

C. Customary Law

It is very important to see whether the provisions in the Convention constitute customary law. This is relevant to the question of the application of the Convention to non-State parties, since to date there are only 45 State parties to the Convention. It is noted that early in 1961 the U.N. General Assembly had requested launching States to furnish information promptly to C.O.P.U.O.S. for the purpose of registration. However, only after the enactment of the Registration Convention in 1975, did the registration and provision of relevant information become a legal obligation.

To be regarded as customary law, two elements should be satisfied: practice and acceptance of such practice as law. While it is no longer true that customary law may be established only after decades of uniform practice by States, international law still requires the passage of some time. The notion of “instant customary law” has been rejected in the 1986 *Nicaragua* case by the reasoning that “the mere fact States declare their recognition of certain rules is not sufficient for the Court to consider these as being part of customary international law ... Bound as it is by Article 38 of the Statute ... the Court must satisfy itself that the existence of the rule

⁶² For discussion of soft law, see further G. J. H. van Hoof, *Rethinking the Sources of International Law* (1983), at 187-188.

in the *opinio juris* of States is confirmed by practice.”⁶³ Furthermore, such practice is accepted as law by the relevant States.

This point has also been well elaborated in another International Court of Justice (I.C.J.) case. In *North Sea Continental Shelf* case, the Court stated, “with respect to the other elements usually regarded as necessary before a conventional rule can be considered to have become a general rule of international law, it might be that, even without the passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself, provided it concluded that of States whose interests were specially affected.”⁶⁴

It is doubtful that the provisions in the Registration Convention constitute customary law. Far fewer States are parties to the Convention, compared with the Outer Space Treaty, which has 97 parties. More importantly, even among the signatories, some are unwilling to furnish information, which is deemed sensitive, and some might provide information at a time totally at their own discretion. Often States delay registering or do not register completely. Accordingly, the practice has been rather divergent concerning registration.

This is contrary to the implication of customary law. As Lauterpacht comments, “... assuming here that we are confronted with the creation of new international law by custom, what matters is not so much the number of States participating in its creation and the length of the period within which that change takes place, as the relative importance, in any particular sphere, of States inaugurating the change.”⁶⁵

To the extent customary law exists for space law at all, it binds all States whether their consent is express or implied by silence in the face of emerging legal norms.⁶⁶ Consensus has developed that customary law applicable to space activities includes essential principles of the Outer

⁶³ *Military and Paramilitary Activities (Nicaragua v. U.S.)* [1986] I.C.J. Rep. 4 at 97.

⁶⁴ *North Sea Continental Shelf Cases (Germany v. Denmark; Germany v. the Netherlands)*, [1969] I.C.J. Rep. 4 at 42.

⁶⁵ H. Lauterpacht, “Sovereignty Over Submarine Areas” [1950] *Brit. Y. Int'l. L.* 376 at 394.

⁶⁶ This is a reiteration of the Article 38 of the Statute of the International Court of Justice with regard to International custom. See further Peter Malanczuk, *Akehurst's Modern Introduction to International Law* (1997), at 44.

Space Treaty which have been accepted by all States active in outer space by practice and with *opinio juris* after ratification, and where no evidence of dissenting practice on the part of non-ratifying States is available.⁶⁷ Unfortunately, this is not the case for the practice identified by the Registration Convention.

D. Cooperation among Launching States

Cooperation among launching States during the launching stage is vital to a successful launch. As provided in the Convention, in case of joint launching, agreement between the signatories is required as to which of them is to be deemed the "State of registry".⁶⁸ Such cooperation should certainly continue at a later stage. As provided in the Convention, the launching States will jointly determine the State of registry and will be jointly and severally liable for any damage caused. Thus, coordination among the States is crucial in sorting out these issues. The cooperation among the States involved in the I.S.S. Project is a very good example of this.

The Intergovernmental Agreement (I.G.A.) was reached in 1988. It was later substituted in 1998 to take account of the participation of Russia.⁶⁹ The I.G.A. offers a long-term international cooperative framework for detailed design, development, operation, and utilisation of a permanently manned civil Space Station for peaceful purpose.⁷⁰ Article 5 of the I.G.A.

⁶⁷ Peter Malanczuk, "Space Law as a Branch of International Law" [1994] Neth. Y. B. Int'l. L. 147. The principles include the freedom of exploration and use of outer space by all States, and the prohibition on national appropriation of outer space.

⁶⁸ Registration Convention, Article VI. This point has been well elaborated by Judge Lachs. See further Manfred Lachs, *The Law of Outer Space, An Experience in Contemporary Law Making* (1972), at p. 70.

⁶⁹ "History of the ISS Project" (1999), <http://iss.sfo.jaxa.jp/iss/history/index_e.html>, at 31 March 2005.

⁷⁰ *Agreement among the government of Canada, governments of Member States of the European Space Agency, the government of Japan, the government of the Russian Federation, and the government of the United States of America concerning Cooperation on the Civil International Space Station*, entered into force on 29 January 1998, in K. F. Nagel, "Das neue Regierung sab kommenuber die Internationale Raum Station" (1998) 47 Z.L.W. 149-163.

deals with the issue of registration, jurisdiction and control.⁷¹ The agreement also establishes a distinct liability regime among the States, which should resolve future disputes. Accordingly, it might be advisable that all launching States reach an agreement before carrying out launching activities setting down detailed arrangements for registration and liability.

It has been reported that the U.S., China and most other major nations with satellites in space have failed to register all of them.⁷² Legally speaking, interests arising out of registered space objects, under protection through the act of registration, can have priority over any other interests from unregistered objects.⁷³ As far as the identification of possible liabilities is concerned, there will still be difficulties with unregistered objects. This is why an agreement will be important for the future of unregistered objects. By referring to the agreement, the unregistered object can be identified and liabilities arising out of the object can be coordinated among the launching States, even though no one is the State of registry. Furthermore, agreements on the national insurance and safety requirements can effectively resolve the issues of compensation at a later stage.

IV. CONCLUSION

The Registration Convention is an important development in the history of space law. It mandates that each party register and maintain a registry

⁷¹ This provision provides that: (1). In accordance with Article II of the Registration Convention, each Partner shall register as space objects the flight elements listed in the Annex which it provides, the European Partner having delegated this responsibility to ESA, acting in its name and on its behalf. (2). Pursuant to Article VII of the Outer Space Treaty and Article II of the Registration Convention, each Partner shall retain jurisdiction and control over the elements it registers in accordance with paragraph 1 above and personnel in or on the Space Station who are its nationals. The exercise of such jurisdiction and control shall be subject to any relevant provisions of this Agreement, the MOUs, and implementing arrangements, including procedural mechanisms established therein.

⁷² "Large Nations Fail to Register Satellites", CNN.com, <<http://archives.cnn.com/2001/TECH/space/08/17/space.satellites.reut>>, at 27 October 2004.

⁷³ See further Paul B. Larsen and Jürgen A. Heilbock, "UNIDROIT Project on Security Interests: How the Project Affects Space Objects" (1999) 64 J. Air L. & Com. 727.

of its launched space objects. In addition to keeping a registry, a State must provide to the U.N. Secretary-General information proving the establishment of a registry.⁷⁴ The enactment of the Convention has helped clarify troubling issues concerning the identification of space objects and has contributed to the application and development of international law governing peaceful use of outer space.

However, as widely advocated by space lawyers, more mandatory and extensive requirements are needed to improve the Convention.⁷⁵ Substantial academic debates have covered various issues, including the application of several terms and specification of registration requirements. New developments in space activities and changing attitudes among the space practitioners necessitate revision.⁷⁶ It is on this forever-shifting carpet that the ongoing research must dance for the Convention is more than necessary right now. The Registration Convention, concretising Art. VIII of the Space Treaty, has obviously lagged behind with the rapid development of space commercialisation and privatisation, which was wholly unimaginable 30 years ago.

Formal discussion has been initiated in the U.N. forum concerning the application of space treaties.⁷⁷ A working group of C.O.P.U.O.S. chaired by Schrogl conducted its deliberations on the concept of "launching State" from 2000 to 2002.⁷⁸ On 10 December 2004, the U.N. General Assembly adopted a resolution concerning the application of the concept of "launching State". One of the recommendations was that States consider enacting and implementing national laws authorising and providing for supervision of non-governmental space activities under their jurisdiction.⁷⁹ Hopefully, the above discussion of loopholes and possible areas for

⁷⁴ Registration Convention, Art. II and IV.

⁷⁵ See for example, Diederiks-Verschoor, above n. 3, 48-49.

⁷⁶ See Lubos Perek, "The 1976 Registration Convention" (1998) 47 Z.L.W. 351-360.

⁷⁷ See for example, Ken Hodgkins, "International Cooperation in the Peaceful Uses of Outer Space, Remarks on Agenda 75 in the Fourth Committee of the United Nations General Assembly" (2002), <<http://www.state.gov/g/oes/rls/rm/2002/14362.htm>>, at 5 April 2005.

⁷⁸ Schrogl, above n. 15, at 286.

⁷⁹ General Assembly Adopts Resolution on the Concept of the "Launching State", *Space Law Update*, C.O.P.U.O.S., Vol. 2, Issue 1 (March 2005).

improvement will lay the foundation for future work taken by
C.O.P.U.O.S. 