The Possible Liability of the State Which Does Not Fall within the Concept of the Launching State

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Abstract

The concept of the launching State is the principal factor for the apportionment of the liability caused by the space activities. This concept remains unchanged even though the content or the actors of the space activities has been changed. This situation creates unjust burden of the liability when the on-orbit sales of satellites are carried out. If the Satellite X of the State A is sold to the State B on orbit, the State A is the launching State but the State B is not deemed as the launching State. If, after the sale, the Satellite X caused damage on the surface of the Earth, only the State A is liable under current space law regime. The State B is not held liable even though it actually controls the satellite.

To solve this situation, the author would like to propose the change of the interpretation of the launching State, especially "the State which procures the launching", to include the actual control of the space objects. This proposal is supported by three following reasons. First, the basis of the State liability is changing to include the actual control over the object which caused the damage. This tendency is found in the treaties of environmental protection and disarmament, and the advisory opinion of the International Court of Justice. Second, under international space law, the actual control is one of the reasons to regulate space activities. Lastly, the work conducted in the United Nations Committee of Peaceful Uses of Outer Space shows that the liability from space activities is based on not only the concept of the launching State but also the international responsibility of the State for its national activities.

I. Introduction

The concept of the "launching State" is the principal factor for the attribution of the liability caused by the space activities. When the content or the actors of the space activities are significantly changed, the liability framework may need to be reviewed. However, due to the hardship to reach

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the consensus at the United Nation, it is now very difficult to amend the international space treaties.[1]

In this paper, the author would like to discuss the concept of the launching State in respect of the on-orbit sales of satellites. Under the current space law regime, the concept of the launching State seems unjust for the State which sells satellites on-orbit. It would be the barrier for the development of the space activities. Therefore, it is suggested to find the reasonable interpretation of the launching State.

Firstly, the concept of the launching State shall be overviewed. Next, the concept of the State liability and its change under general international law shall be analysed. If there is a change to the concept of the State liability, it would be reasonable to adopt such change to the concept of the launching State. Lastly, the recent study at the United Nations is reviewed. The purpose of this review is to understand the current recognition by the States concerning the concept of the launching State especially related to the on-orbit sales of satellites.

II. Concept of the Launching State

The launching State is defined as, under the Article I (c) of the Liability Convention,[2] (i) a State which launches a space object, (ii) a State which procures the launching of a space object, (iii) a State from whose territory a space object is launched, and (iv) a State from whose facility a space object is launched. Each category of the launching State is closely connected with the launch activities. Therefore, if a State starts the space activities without being involved in the launch activities, such State does not become the launching State; it will not be liable for the damage caused.

As the lifetime of satellites becomes longer, on-orbit sales of satellites have become a common deal.[3] The problem does not arise when the on-orbit sales are held between the launching States. This is because both the original owner and the new owner remain liable irrespective of the on-orbit sale of satellite. However, the attentions should be paid to the situation that the satellite is sold to the non-launching State. When the damage is caused by the satellite which has been sold to the new owner, the original owner as the

1 At the time the Moon Treaty was signed, the number of the Member States of the United Nations Committee of Peaceful Uses of Outer Space was 53. As of 2015, the number increased to 83. (http://www.unoosa.org/oosa/en/ourwork/copuos/members/evolution.html) (last accessed July 24, 2016).

2 Convention on International Liability for Damage Caused by Space Objects, signed on 29 March, 1972, entered into force on 1 September 1972, 961 U.N.T.S. 187.

3 For example, the purchase of Koreasat 2 & 3 by ABS (http://www.absatellite.com/2010/05/24/asia-broadcast-satellite-acquires-koreasat-3/) (last accessed 26 June 2016); the purchase of JCSAT 4 by Intelsat (http://spacenews.com/turksat-use-borrowed-intelsat-craft-placeholder/) (last accessed 3 July 2016).

launching State shall be liable for the victims even though such launching State has no actual control for the satellite. In contrast, the new owner, which does not involved in the original launch, will not be held liable because such State is not regarded as the launching State.

This would not be an important issue as far as victims are concerned, because the current space law regime would surely make the launching State compensate the victims' damage. In addition, such status of the liable launching State is eternal: once the State becomes the launching State, there is no way of escaping from such position.[4] Needless to say, the selling State can stipulate in the sales contract of the on-orbit satellite the compensation against the buying State when the selling State is held liable under international space law.[5] Also, the apportionment of such liability can be addressed by the agreement between the States concerned.[6] If this agreement is concluded before the transaction, it would assure the indemnification between those States. But concluding this kind of agreement is time consuming and directly affects the process of the transaction. Moreover, this agreement does not have the opposability against the third State which suffered the damage. Even though the State concerned agreed the final bearer of the liability, the launching State shall compensate the damage against the victims in the first place.

To address this situation, the author proposes the change of the interpretation of the launching State, especially the State which procures the launching. This is because the interpretation of the word "procure" is not yet determined.[7] Therefore, from the next chapter, the State liability under general international law shall be reviewed and it is aimed to find out the

4 Henry R. Hertzfeld and Frans G. von der Dunk, "Bringing Space Law into the Commercial World: Property Rights without Sovereignty", *Chicago Journal of International Law*, Vol 6, Issue 1 (2005), p. 89.

5 B. Schmidt-Tedd et al., "Future Perspectives of The 2007 Resolution on Recommendations on Enhancing the Practice of States and International Intergovernmental Organizations in Registering Space Objects" in Stephan Hobe et al. eds., *Cologne Commentary on Space Law,* Volume III (2015), pp. 471-472; Armel Kerrest, "Remarks on the Notion of Launching State", *Proceedings of the 41st Colloquium on the Law of Outer Space* (1999), p. 309.

6 The Federal Communications Committee of the U.S. issued the order when they approve the change of control of the Intelsat 601 satellite from the U.S. company to the German company. Such order confirmed the responsibility of each State arising from the control of the satellite. (https://apps.fcc.gov/edocs_public/attachmatch/DA-07-4482A1.pdf) (last accessed 3 July 2016).

7 The specific meaning of the "procure the launching" is not revealed during the discussion of the Liability Convention. However, the example of "the procure the launching" may be the case that the government of one State bares the cost of the launching and asks the nationals of its own or other State to launch. (Fumio Ikeda, *The Theory of Space Law* (in Japanese) (1971), p. 223).

better interpretation of the concept of the launching State to achieve the reasonable and fairness apportion of the liability.

III. The Basis for the State Liability and Its Change

The Basis for the State Liability

First of all, the principles of the State liability have to be touched upon.

Within its national territory, each State is entitled to exercise its jurisdiction freely, unless there is an explicit rule of international law or a legally binding treaty that limits such freedom,[8] and "[t]his right has as corollary a duty: the obligation to protect within the territory the rights of other State, together with the rights which each State may claim for its nationals in foreign territory".[9] Therefore, each State is delegated to exclusively govern its territory as to achieve the common benefit for realizing a minimum protection which international law requires,[10] but at the same time, those exclusivities accompany obligations. If the State fails to fulfil those obligations, such State is held liable because of its breach of established rules under general international law. These explain that the State jurisdiction is generated from its territory, and this jurisdiction leads to incur the State's responsibility and liability.

The concept of the launching State has been adopted to incur liability for the State. Although, the definition of the launching State does not use the word "jurisdiction", the concept of the launching State seems to be based on the jurisdiction.

The State jurisdiction over a space object is defined in Article VIII of the Outer Space Treaty.[11] The outer space is not subject to national appropriation, as a result, jurisdiction over space objects is needed to regulate space activities.[12] Article VIII states that the State of registry shall "retain jurisdiction and control over such object" "while in outer space or on a celestial body". The attention should be paid to the words "retain" and "jurisdiction and control". The word "retain" means "to keep something or continue to have something"[13] and jurisdiction and control over a space

8 Publication of the Permanent Court of International Justice, series A, No. 10, Collection of Judgements, The Case of the S.S. "Lotus" (7 September 1927), p. 18.

9 Island of Palmas case, Reports of International Arbitral Awards, Vol. 2, p. 839.

10 Sugyon Hou, *The theory of the title of territory – the workability and lawfulness of the control of the territory* (in Japanese) (2012), p. 125.

11 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, signed on 27 January, 1967, entered into force on 10 October, 1967, 610 U.N.T.S. 205.

12 Gabriel Lafferranderie, "Jurisdiction and Control of Space Objects and the Case of an International Intergovernmental Organisation (ESA)", *German journal of air and space law*, Vol. 54, Issue 2 (2005), p. 230.

13 Longman Dictionary of Contemporary English.

object are said to be retained while it is in outer space. These show that jurisdiction and control of the space object does not emerge at the time when it is reached in outer space. Then, when does jurisdiction and control is attached to space objects?

The answer may be the time that the very first moment that a mere thing turned into a space object. The mere thing locates in one State is under the jurisdiction of such State. The Article II of the Liability Convention states that the launching State shall be liable for the damage caused by its space object on the surface of the Earth. The damage may be caused at the time of launch, therefore, at least at the time of the launch the mere thing must be turned into space objects in order to incur liability for the launching State. In this respect, at least at the moment of the launch, jurisdiction and control may emerge over the space object.[14]

Jurisdiction and control is retained by the State of registry. According to the Registration Convention,[15] one of the launching States can register a space object.[16]

Considering what has just been said, it can be concluded as follows; (i) the mere thing turns into the space object at the time of launch: (ii) at the launch, jurisdiction and control over the space object emerges: (iii) the State of registry retain jurisdiction and control: and (iv) only the launching State can be the State of registry. On this, it is a reasonable and a logical conclusion that the launching State is a liable State since the launching activity is closely connected to jurisdiction and control over a space object,[17] and such conclusion is similar to the concept of the State liability under general international law.

Changes in the Basis for the State Liability

As stated above, the State is liable because the State has territorial jurisdiction. In principle, the State shall not be liable from the act of its nationals outside of its territory. However, the State liability shall arise when the State fails to fulfil the duty of care to prevent the damage caused by its nationals outside of its territory. To what extent such duty of care is reassured? In general, it is measured by the foreseeability and the practicability of the State against the act of its nationals.[18] In this respect, not

14 Bin Cheng, "The Commercial Development of Space: the Need for New Treaties" in *Studies in International Space Law* (1997), p. 655.

15 Convention on Registration of Objects Launched into Outer Space, signed 14 January, 1974, entered into force 15 September, 1976. 28 U.S.T. 695, T.I.A.S. No. 8480, 1023 U.N.T.S. 15.

16 Article 1 (c) of the Registration Convention.

17 Stephan Gorove, "Sovereignty and The Law of Outer Space Re-examined", *Annuals of Air and Space law* (1977), Vol. 2, p. 320.

18 Tomoyuki Yuyama, "Fault and Due Diligence in International Law of State Responsibility (4)" (in Japanese), *Kagawa Law Review* (2002), Vol. 22, p. 50.

only the jurisdiction but also the control of the State shall be the factor to measure such duty of care.[19]

In addition, some treaties provide for the liability of the State which arises from the act of its nationals outside of its territory. A well-known example is found in the Article VI of the Outer Space Treaty. This article stipulates the international responsibility for national activities for the State Parties even though such activities are carried out by non-governmental entities. Moreover, concerning the control and operation of the nuclear facilities and the nuclear ships, liability for the State arises from the act of non-governmental entities based on the treaty provisions.[20] For the prevention of the pollution of the sea, International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage[21] allows the State concerned to assume liability on behalf of the non-governmental entities.

These treaties provide that, under certain conditions, the State shall be liable due to the acts of its nationals or its registered vessels even though they are outside of its territory. Therefore, Professor Ando, one of the eminent scholars in the field of the laws of international responsibility, concluded that the basis for those liabilities arises from the actual possibility of the State to control the action or inaction of private persons, e.g. authorization and supervision.[22] Professor Ando also states that the content of the State liability differs depending on the extent of control held by the State concerned toward such non-governmental activities.[23] In other words, the primary basis for the State liability is its territory or its jurisdiction, while, as evidenced by some treaties, the State liability also arises from the fact that the State has the control over the cause of such damage.

Jurisdiction or Control

Such concept is often found where using the word "jurisdiction or control". Previously, the words "jurisdiction" and "control" were used as "jurisdiction and control". This concept, jurisdiction and control, has been recognized as

19 *Ibid.*, p. 85-89.

20 For example, Convention on the Liability of Operators of Nuclear Ships, signed 25 May, 1962, 57 A.J.I.L. 268.

21 Signed on 18 December 1971, entered into force on 16 October, 1978, 57 U.N.T.S. 1110.

22 Nisuke Ando, "Responsibility of a State for Acts of Individuals outside of its Territory – Recent Practice of States in the Fields of Nuclear Liability, Space Law, and Marine pollution –" (in Japanese), *Kobe Law Journal* (1980), Vol. 30, No. 2, p. 339.

23 *Ibid.*

"a legal connection which is inseparable and integral in nature".[24] But such usage has been changed.

These days, such term is used as "jurisdiction or control". The word "jurisdiction" has always meant that territorial jurisdiction of the State, while the meaning of the word "control" is equivocal. In one theory, the word "control" is intended to regulate the object which is under the personal jurisdiction of the State, such as nationals, vessels and aircraft to which nationality is attached. On the other hand, the word "control" includes the "actual control", therefore, the foreign subsidiaries, where its national company substantially control, may be included under the scope of "control".[25] Based on this theory, the State is becoming liable not only because of its jurisdiction but also of its control.

One of the examples which uses "jurisdiction or control" is found in the Stockholm Declaration.[26] The principle No. 21 provides that the States have "the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of area beyond the limits of national jurisdiction." This principle broadens the State liability to include the activities under its control, in addition to the activities under its jurisdiction. The use of the words as "jurisdiction or control" was surely "intended to consider both "jurisdiction" or "control" as *separate* and *sufficient* bases for triggering the State's obligation".[27] Recently, the International Law Commission also used the word "jurisdiction or control" in the making of the draft articles for the protection of the environment and the apportionment of liability arising from the transboundary environmental damage.[28]

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24 Shinya Murase, "State Responsibility for Control of Multinational Enterprises in International Environmental Law" (in Japanese), *Journal of International Law and Diplomacy* Vol. 93(3-4) (1994), p. 151.

25 Chiyuki Mizukami et al. eds., *International Environmental Law* (in Japanese) (2001), p. 241.

26 Declaration of the United Nations Conference on the Human Environment (U.N. Doc. A/CONF.48/14/Rev.1).

27 Francesco Francioni, "Exporting Environmental Hazard through Multinational Enterprises: Can the State of Origin be Held Responsible?" in Francesco Francioni and Tulllio Scovazzi eds., *International Responsibility for Environmental Harm* (1991), p. 289.

28 The draft articles of "Consideration of prevention of transboundary harm from hazardous activities and allocation of loss in the case of such harm" decided in 2001 at ILC and commended in the UN General Assembly in 2007 (UN Doc. A/RES/62/68 (8 January 2008)). It provides that the activities for which steps for the prevention apply are those are planned or carried out under the jurisdiction or control of the State (Article 2 (d)). "Allocation of loss in the case of transboundary harm arising out of hazardous activities" decided in 2006 at ILC and taken note in the UN General Assembly in 2006 (UN Doc. A/RES/61/36 (18 December 2006)). It defines the "State of origin" as "the State in the territory or otherwise under the jurisdiction or control

In order to have the effective regulation for both the territory under the jurisdiction of the State and the area not under the jurisdiction, this trend is found not only in the field of environmental protection but also that of disarmament. "Jurisdiction or control" is used as the criteria to enforce the obligations for the State. For example, several treaties concerning disarmament use "jurisdiction or control" to determine the scope of obligation of prohibition and prevention, or the scope of steps for verification.[29]

The Liability from Control

In fact, the jurisprudence supports this idea. To include "actual control" to the basis for the State liability is found in the advisory opinion of International Court of Justice.

The background of this opinion is that, after the World War II, South Africa intended to merge Southwest Africa, which was the area of the mandate under the United League of Nations. After the World War II, the United League of Nations was dismissed and the General Assembly of the United Nations asked South Africa to withdraw its administration, but South Africa refused and kept staying in that area. That situation led the General Assembly to ask ICJ to give the opinion of the legal consequences arising from this act. The advisory opinion states that "[t]he fact that South Africa no longer has any title to administer the Territory does not release it from its obligations and responsibilities under international law towards other States in respect of the exercise of its powers in relation to this Territory. Physical control of a territory, and not sovereignty or legitimacy of title, is the basis of State liability for acts affecting other States".[30] In this way, the opinion of ICJ demonstrates that the State liability arises from the actual control.

Space Activities and Control

As confirmed above, under general international law, the State liability arises from its control. In this section, it is reviewed how the control is handled under international space law.

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of which the hazardous activity is carried out" (Principal 2 (d)), and such State is obliged to take all necessary measures for adequate compensation for victims (Principal 4).

29 Such words can be found in, for example, Article 1 of the Partial Test Ban Treaty, (480 U.N.T.S. 43); Article 9 of the Convention on the Prohibition of Anti-Personnel Mines (2056 U.N.T.S. 211); Article 2 of the Biological Weapons Convention (1015 U.N.T.S. 163).

30 ICJ Reports 1971, para 118.

Article 12.1 of the Moon Agreement[31] provides that the State Parties shall retain jurisdiction and control over the stations on the Moon. Different from the Outer Space Treaty, the registration is not the link of jurisdiction and control. Rather, the basis for jurisdiction and control for the stations on the Moon is the ownership by the State or by the national State of a private person if such station is owned other than by the State.[32]

The Rescue Agreement,[33] instead of adopting the concept of the launching State or the State of registry, uses the concept of the launching authority. The launching authority is defined as the State or the international intergovernmental organization responsible for the launch.[34] The meaning of this responsibility is not necessarily clear.[35] This Agreement states that the personnel of a spacecraft or a space object shall be returned to the launching authority.[36] The space objects may be returned to the international intergovernmental organization, therefore, the reason for the return to the launching authority cannot be based on its jurisdiction over space objects. This is because the jurisdiction belongs only to the State, not to the international intergovernmental organization. From this, the actual control is used as the link between the personal or space objects and the State concerned.

In conclusion, under current space law regime, the word "control" does not appear, but the concept of the actual control underlies. In this respect, with the tendency of the general international law, it would be reasonable to admit the liability of space activities based on the actual control.

IV. The Study at UN COPUOS

The actors and contents of space activities are changing because the space technology has been developing rapidly. Even though this rapid development, there has been no change to the international space law since the adoption of the outer space treaties.[37] The United Nations Committee on Peaceful Uses of

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31 "Agreement Governing the Activities of States on the Moon and Other Celestial Bodies", signed on December 18, 1979, entered into force on July 11, 1984, 1363 U.N.T.S. 3.

32 Bin Cheng, "Nationality for Spacecraft?", in *Studies in International Space Law* (1997), p. 486.

33 "Agreement on the Rescue of Astronauts and the Return of Objects Launched into Outer Space", signed on April 22, 1968, entered into force on December 3, 1968, 19 U.S.T. 7570, T.I.A.S. No. 6599, 672 U.N.T.S. 119.

34 Article 6 of the Rescue Convention.

35 Bin Cheng, "The 1968 Astronauts Agreement", in *Studies in International Space Law* (1997), p. 280.

36 Article 4 and 5.3 of the Rescue Convention.

37 The Article 10 of the Registration Convention has the provision for the amendment. It provides after ten years "the question of the review of the Convention shall be included in the provision agenda of the United Nations General Assembly". In 1986, even though UN General Assembly discussed this matter, the amendment for the

Outer Space (UN COPUOS), at least, has been studying the concept of the launching State. Those efforts are helpful to reconsider the State liability resulting from the control of the space objects.

The Application of the Concept of the "Launching State"[38]

The concept of the launching State has been the principal provision for the apportionment of the liability from the space activities, however, such concept was challenged by the new types of space activities.[39] With the efforts of many scholars for the problem arising from this concept, UN COPUOS has adopted the agenda item for "the review of the application of the concept of the launching State".[40] Such review was conducted from 2000 to 2002, but with the restriction of giving the considerable normative value only, instead of giving authoritative interruption of the treaties.[41]

The study shows that the States are inclined to assure the adequate application of the treaties not through the interpretation of the launching State but through national legislations or agreements between the States concerned.[42]

This agreement is found in the 2nd recommendation. It is provided that "[s]tates consider the conclusion of agreements in accordance with the Liability Convention with respect to joint launches or cooperation programmes". This recommendation is inspired by the Liability Convention which stipulates that the participants in the joint launching may conclude agreements regarding the apportioning of the financial obligation for the liability.[43] Under the Convention, the words "joint launching" is used, while the recommendation adopts not only joint launches but also cooperation programmes. It allows to widen the concept and to include the States which actually operates the satellite. Therefore, this recommendation assures the protection of the victims even though the concept of the launching State is not employed.

On-orbit sale of satellites are dealt in the 3rd recommendation. It is provided that "the Committee of the Peaceful Uses of Outer Space invites Member

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Convention did not happen (UN Doc. A/RES/41/66 "Question of the review of the Convention on Registration of Objects Launched into Outer Space").

38 A/RES/59/115 (10 December 2004).

39 Matxalen Sanchez, et al., "Historical Background and Context of The 2004 Resolution on the Application of the Concept of the 'Launching State' (LS Resolution)" in Stephan Hobe et al. eds., *Commentary on space law* Vol. III, p. 368-369, 370-371.

40 A/RES/54/67 (11 February 2000).

41 Matxalen Sanchez, et al., "The 2004 Resolution on the Application of the Concept of the 'Launching State' (LS Resolution)" in Stephan Hobe et al. eds., *Commentary on space law Vol. III* (2015), p. 372.

42 *Ibid.*

43 Article 5.2 of the Liability Convention.

State to submit information on a voluntary basis on their current practices regarding on-orbit transfer of ownership of space objects". This recommendation is rather weak compared to the 4th recommendation, however, it reflects the drafters intention to symbolize the new types of space activities.[44]

From above, it is found that the on-orbit sale of satellite is addressed differently from joint launching, therefore, even though the "cooperation programmes" concept is useful for the liability arising from the launch activities, the concept of the launching State is not broadened so as to include the new owner State as the launching State.

Enhancing the Practice of States and International Intergovernmental Organization in Registering Space Objects

Next recommendation of the General Assembly concerning the on-orbit sales of satellites is found in "Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects".[45] This work is regarded as the follow-up of the deliberation of the previous work of the UN COPUOS, the review of the concept of the launching State because the previous work revealed that the registration practice needs a close analysis.[46] It was from 2004 to 2006, the Working Group worked on this matter.[47]

The purpose of the registration of space objects is to "assist in their identification" and "contribute to the application and development of international law governing the exploration and use of outer space".[48] Only the launching State may become the State of registry,[49] and consequently the practice of registration is strongly related to the concept of the launching State.

According to the recommendation, in case of the joint launching, "each space object should be registered separately".[50] When a private company launches a satellite from the foreign territory, the national country of such private company shall register such satellite, and the territorial launching State or the State to which such facility belongs shall register the launch vehicle. It means that the national State of the satellite operating company is deemed as the

44 Matxalen Sanchez, et al., *supra* note 41, p. 371.
45 A/RES/62/101 (17 December 2007).
46 B. Schmidt-Tedd et al. "Historical Background and Context of The 2007 Resolution on Recommendations on Enhancing the Practice of States and International Intergovernmental Organizations in Registering Space Objects" in Stephan Hobe et al. eds., *Cologne Commentary on Space Law,* Volume III (2015), p. 409.
47 *Ibid.*, p. 411-412.
48 Preamble of the Registration Convention.
49 Article 1 (c) of the Registration Convention.
50 Recommendation 3 (c).

State which "procures the launching".[51] This interpretation is not a large departure from the original concept of the launching State, since such company is involved in the launching in the first place.
This 2007 recommendation states the on-orbit sales of satellite as follows; "following the change in supervision of a space object in orbit, the State of registry could furnish to the Secretary-General additional information".[52] It does not specifically refer to the on-orbit sale of satellites, but adopts the concept of supervision, and it broadens the coverage of furnishing additional information.[53] Supervision of a space object describes the legal relations "in the context of possession, legal access and contractual relationships".[54] This leads to the situation where the satellite operator in State A sold the satellite to the new operator in the same State, the State is recommended to furnish the additional information. In this situation, the national State of the satellite operating company remains unchanged, and the launching State or the State of registry does not change. Nevertheless, this recommendation asks for the additional information. Therefore, this recommendation clearly focused on the actual control rather than the jurisdiction over the space objects.
Considering the efforts made in the UNCOPUOS, the basis for the liability of space activities is changing; it is now based on the activities of its nationals, not the act of launching. In other words, the liability for space activities is reorganized "based on Article VI of the Outer Space Treaty rather than article VII of the Outer Space Treaty and the Liability Convention".[55]

V. Conclusion

Under general international law, the State liability shall arise from the actual control, in addition to the traditional concept based on its territory or its jurisdiction. And from the studies in UN COPUOS, it can be concluded that the liability scheme for space activities is changing from Article VII of the Outer Space Treaty scheme to Article VI thereof.
Article VI of the Outer Space Treaty requires the authorization and continuing supervision by the appropriate State Party. The meaning of the appropriate State remains unclear since 1960s. Some scholars interpret it as the State which actually controls the space activities or provides funds

51 Setsuko Aoki, "The Implications of the Cosmos 2251-Iridium 33 Collision: A State with "Genuine Link" Matters, not a Launching State" (in Japanese), *Journal of International Law and Diplomacy,* 110 (2) (2011), p. 37 (169).
52 Recommendation 4.
53 B. Schmidt-Tedd et al. "Paragraph 4 of The 2007 Resolution on Recommendations on Enhancing the Practice of States and International Intergovernmental Organizations in Registering Space Objects" in Stephan Hobe et al. eds., *Cologne Commentary on Space Law,* Volume III (2015), p. 454.
54 *Ibid*., p. 453.
55 Setsuko Aoki, *supra* note 51, p. 38 (170).

subjectively,[56] while others interrupt it more broadly.[57] The State liability under Article VI of the Outer Space Treaty is same as those of general international law.[58] That means the State shall be liable if there is the illegal act of the State. The State liability as the launching State for damage on the surface of the Earth arises without fault. Even though when the State liability arises under the Article VI of the Outer Space Treaty, it is uncertain that such liability is same as the launching State in respect of fault. Needless to say, it is very useful to reorganize the liability scheme under Article VI of the Outer Space Treaty, yet a question remains. Therefore, to surely have the compensation for the victims of the space activities, the traditional concept for the liability from the space activities under Article VII should be maintained.

International space law is regarded as *lex specialis*, therefore, even though the new tendency is admitted under general international law, the liability based on control should be admitted within international space law regime. On this, the interruption of the launching State shall be reconsidered; the concept of the launching State shall be extended to include the State which actually controls the space activities.

In reality, some States adopt their national space law which imposes liability on the non-governmental entities due to the control of the space objects.[59]

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56 William B. Wirin, "Practical implications of launching state – Appropriate state definitions", *Proceedings of the 37th Colloquium on the Law of Outer Space* (1994), pp. 113-114.

57 Michel Bourely, "Rules on International law governing the Commercialization of space activities", *Proceedings of the 29th Colloquium on the Law of Outer Space* (1986), p. 157.

58 Michael Gerhard, "Commentary on Article VI of the OST", in Stephan Hobe et al. eds., *Cologne Commentary on space law*, Vol. 1 (2010), p. 116.

59 For example, the Austrian national space law (Austrian Federal Law on the Authorisation of Space Activities and the Establishment of a National Space Registry) provides the definition for the Operator, who is a natural or juridical person that carries out or undertakes to carry out space activities (Article 2.3) and such space activities include the launch, operation or control of a space object, as well as the operation of a launch facility. And in the case that Austrian government has compensated damage caused by such space activity in accordance with international law, it is stated that the government has the right of recourse against the operator (Article 11). The Belgium space law (Law of 17 September 2005 on the Activities of Launching, Flight Operation or Guidance of Space Objects) also defines "operator". It is "the person that carries out or undertakes to carry out the activities" "by ensuring" "the effective control of space object" (Article 3.2). This "effective control" means "the authority exercised on the activation of the means of control" "necessary for the implementation of the activities of launching, the flight operations and guidance of one or more space objects" (Article 3.3). When the Belgian State is liable under the Outer Space Treaty, the State may ask for compensation against the operator (Article 15.1).

When both changing the basis for the State liability under general international law and the several State practices are hand in hand, the State actually controls the space activities can be regarded as the State which procures the launching, the launching State.[60] If this interpretation becomes prevalent, the State which buys the satellite on-orbit should be held liable for the damage caused by such satellite. In addition, this interruption increases the number of the launching States, thus making more States liable. This would surely be beneficial for the victims in ensuring compensation, which is a basic purpose of the international space law.

The Japanese new space activities law which is under discussion provides that the person who controls the artificial satellite using the facilities located in Japan shall be liable for the damage caused by the control of such artificial satellite. Also such liability arises without fault (Article 53).

60 Article 31.3 (b) of Vienna convention on the law of treaties (1155 U.N.T.S. 331.) provides that "any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation" shall be taken into account for interruption of the treaties.