IISL -99-IISL. 4.03

Remarks on the Notion of Launching State

Armel Kerrest
Professor of International Law
Faculty of Law, University of Western Brittany.
Président de l'Association pour le Développement du Droit de l'Espace en France (ADDEF)
IISL ECSL *

Introduction

For some people, one of the major difficulties impeding the development of commercial space activities relates to the definition of "launching State" and subsequently the absolute liability of States for national activities under the Outer Space Treaty (OST) and the liability convention.

The current system is often criticised: the Space treaties should be fundamentally amended (or even completely changed) in such a way as to abolish States' liability and even responsibility and control in order to give the way to commercial activities.

I do not share this view. First of all, it is a matter of principle: Space activities are still the fact of some few rich countries. They may enjoy freedom of use, as it was agreed upon at the beginning of Space era, it is fair that they accept responsibility and a large and objective liability for their activities. Secondly from a practical point of view. Having had the opportunity to take part in some of the meetings of the Copuos legal sub-committee, I know that it would be absolutely impossible to create a new satisfactory system accepted by consensus.

As far as the definition of "launching State" is concerned, two real problems, some questions of interpretation of the current criteria and two false problems must be taken into consideration because of commercialisation of activities in outer space.

I Two real difficulties arising from the current definition of Launching State.

A first real problem may arise when the spacecraft is sold while in orbit. In that case, what append to the registration and to the control over the spacecraft? In other words what is the "appropriate" State in accordance to OST article VI? What is the State which "shall retain jurisdiction and control over such object, and any personnel thereof, while in outer space or on a celestial body" according to OST article VIII ? To which State the object or its component parts "shall be returned (to)" in the case of an accident (article VIII in fine).

Is it possible to **modify the registration** in order to take into account the change in ownership or not? [1] If it is possible, another question may be asked: is it possible for a State who is not a launching State to register a spacecraft?

According to article 1 point c and article 2 of the Registration Convention, the answer to this second question is : no. No wonder, the registration

Email: Armel.Kerrest@univ-brest.fr

was drafted in such a way to identify at least one of the liable launching States.

The only example of a change in registration made in application of the registration convention was the case of three satellites: AsiatSat 1, Apstar-1 and Apstar-1A. They were transferred from the UK register to the Chinese one when Honk Kong returned to China. This precedent shows that a change is possible but it does not give us any information on the interpretation of article 1 and 2 when the second State is not one of the original launching States. Those satellites were launched from China making China one of the original launching States.

In case of a sale of an orbiting satellite to a national of a State, which is not an original launching State, this change is not possible, some difficulties may occur.

1) This new State will not be liable under the OST article VII and under the liability convention. Only general rules of international responsibility / liability would apply.
2) According to article VIII of the OST the State of registry will keep the object under its jurisdiction and control even if it has no more practical capacity to do so.
3) According to article VIII of the OST, (in fine) if parts of the satellite are found, they shall be returned to the State of registration, which is no more the State of ownership.
4) As the notion of "appropriate State" of article VI is rather vague it could apply to the new State. If we accept this interpretation, the appropriate State is going to be internationally responsible for this activity but should neither be the State of registry nor the liable State under the liability convention.

This situation may induce a very complicated system, as it should be necessary to set in place a sophisticated set of agreements between all these States.

Two main problems should be solved through special agreements:

- The first one concerns the absolute liability under the liability convention. It should be necessary to guaranty the launching State(s) if a damage occurs and that, according to the liability convention, it has to pay for the whole. As the new State was not a party to the possible launching agreement, it is necessary to make a new agreement to take into account the change of ownership and practical control.
- The second is connected to the fact that the State of registry is no more directly in a position to exert its jurisdiction and control. It would therefore be necessary to enable the new State to exert these competencies but also to protect the State of registry should its international responsibility be engaged by any unlawful action by the new State or by the private company owning and using the satellite.

This new set of agreements would be rather heavy and would disturb the good control and regulation of the activity. I therefore suggest a change of the rule i.e. to accept the registration by a non original launching State.

The problem is to know how this change should be made.

Theoretically, the best way would be for the States Parties to the treaty to amend article 1 and 2 of the Registration Convention. We know that this is a very difficult issue. I am very much aware of the fact that it is not possible to amend the treaties.

Thus, I propose to interpret the Registration Convention as to allow a non-original launching State to register a spacecraft. The practical solution should be to consider this State as one of the liable launching States. The Copuos should, by consensus, propose to the General Assembly to ask the Secretary General to accept registration changes to a non-original launching State. In that case this State would be a liable "launching State" through its own recognition and because of article 1 and 2 of the Registration Convention. In my opinion, if the decision is accepted by consensus, this solution would be compatible with the competence of Copuos and UN General Assembly, it should also be an acceptable interpretation of the convention.

The second real problem may appear in a foreseeable future. It is related to **Reusable Launch Vehicle**. At every launch of the spacecraft, a new set of launching States are involved. In the case of a space plane, the mere fact of taking off from a territory would make the State of this territory a launching State, not only for damage

caused by the space plane and its component parts but also for the damage caused by the payload itself.

For the time being it is the case for the US space shuttle, every new launch is considered as a launch and registered as such. It would perhaps be difficult to go on that way when frequent landings and takes off will take place.

Fortunately for us, the engineers seems to have many difficulties with such programs, the lawyers have some years to think about this issue and to find a practicable solution.

II Interpretation of the four criteria.

We all remember the four criteria used to identify a launching State.

A Some technical and commercial developments call for clarification.

When private entities are involved, these criteria indicate a link between an activity and a State's jurisdiction. If we use the basic notions of international law as professor Bin Cheng did in its remarkable article about spacecraft nationality[2], one criterion relates to territorial jurisdiction: territory, one to quasi-territorial jurisdiction: facilities, to two personal jurisdiction: the company which launch and the company procuring the launch, as in that case, the activity of these companies are national activities according to OST article VI.

The territorial criterion is rather obvious; there are nevertheless some difficulties if maritime territory is concerned. If territorial sea is part of the territory of the coastal State, it does not seem to be the case for EEZ, which is part of the high sea.[3]

The quasi-territorial criterion i.e. the flag of ships, registration of platforms and of aeroplanes, creates more difficulties, as in some cases they are freely chosen by the company using them.

The more controversial criteria are the personal ones. For both of them a problem of interpretation arises in the case of an international consortium composed of several companies. The example of Sea Launch may be used: as every private entity, the consortium as a whole has a nationality, here it is registered as a Limited Duration Company in the Cayman Island. We can see why this nice island had been chosen. Sea Launch lawyers were certainly good tax avoiding specialists but they were not enough aware of Space Law. The first State to be one of the launching States was the UK as Cayman Islands are a crown colony of Great Britain. In accordance with the UK Space act they should have asked for a licence. It was not so clear at the beginning neither for Sea Launch nor for the British authorities, but now the situation is being clarified.

Then, what about the companies taking part to the consortium itself. The Sea Launch Company is owned by Boeing Commercial Space Co. of Seattle, Wash. (40%); RSC-Energia of Moscow, Russia (25%); Kvaerner Maritime a.s of Oslo, Norway (20%); and KB Yuzhnoye/PO Yuzhmash of Dnepropetrovsk, Ukraine (15%).

According to the Sea Launch User's Guide[4]: *"Sea Launch partners and their operational contributions are: Boeing Commercial Space Company: providing the payload fairing, analytical and physical spacecraft integration, and mission operations.*

RSC Energia, providing the Block DM-SL third stage, launch vehicle integration and mission operations.

YB Yuzhnoye/PO Yuzhmash providing the first two Zenit-3SL stages, launch vehicle integration support and mission operations

Kvaerner Maritime a.s. providing operational services to the launch platform Odyssey and assembly and command ship, Sea Launch Commander".

Are they launching in the sense of the treaties? According to this information, every partner seems to be very much involved in the launching activity, much more than the Cayman's island or the British government.

While elaborating the four criteria it was proposed to ask for an "active and substantial participation" in the launch in order for a State to be considered as one of the launching States.

We can perhaps find a solution by looking at the most high-level domestic space law i.e. the US Commercial Space Launch act 1984. This text is very interesting, as it does not only use formal nationality but also refers to the real ownership of the company[5]. It states that United States citizen means not only a citizen and an *"entity organized under the law of the US but also such an entity which is organized or exists under the laws of a*

foreign nation, if the controlling interest (as defined by the Secretary in regulations[6]*) in such entity is held by an individual or entity described in subparagraph (A) or (B)*. This seems to be a very good solution and should be used by other States. In the case of overlapping of jurisdiction, agreements are possible. They are envisaged in the US CSLA, in the UK law[7] and in the Australian law[8].

Another problem lies in the definition of procurement. It is obvious that a State requesting a launch company to launch its satellite is "procuring" the launch in the meaning of the treaties. But, in the case of instruments installed on a space platform, is the State using this possibility one of the launching States? [9]

B How will this interpretation takes place?

The identification of the launching States for a launch is of course of great interest. In one case we will have a decision, in some other we will be given some strong indications.

1 A decision: the international judge.

This judge should be for instance the ICJ, any arbitration tribunal or the Claims Commission created by the liability convention. For the time being, we have no judicial precedent. The only dispute arising from an accident (i.e. the Canada - Soviet Union Cosmos case) was settled by an agreement without using any international judge.

2 Some strong indications

In some cases strong indications arise from the behaviour of the possible launching State.

a) There is no doubt at all for the State of registry. Only a launching State may register a spacecraft under the Registration Convention. Thus the fact to register a spacecraft is indisputable.

b) A good indication can be derived from the quotation in the declaration by another State. The declarations are not uniform. The declaration by Japan for instance, in compliance with article VI of the registration convention at its point a[10] indicates "Name of Launching State" is made as follow: Japan (France, United States of America)[11]

This declaration has not the same value for France and the US than for Japan, but we can assume that if they did not object they accepted this indication.

c) In the case of a licence granted for the launch by a State in compliance with its national space law, given the purpose of these laws, the State having licensed a launch may be presumably regarded as a liable launching State.

d) Express acceptation by a State may be considered. The fact of taking part to a launching agreement specially the agreement mentioned in the registration convention article II/2 should be a strong indication.

Given the importance of these launching agreements it would be useful to publish them in order for the potential victims to be aware of the States involved in a launch.

III Two false problems

The plurality of launching States and the payment by States for damage caused by private entities.

May I make two points, which I am going to discuss:

1 The plurality of launching States is an advantage for the victims and, if some proper measures are taken, is quite acceptable for the States involved.

2 As far as private entities' activities are concerned, the launching States' obligation under the liability convention is, in fact, more an obligation to control and to guarantee that an obligation to pay for the damage.

A The plurality of launching States

At the beginning of Space era, the United States or the Soviet Union launched their satellites from their territory with their rockets using their facilities. Only one launching State, in some cases two, for instance when some other States were using a launcher to procure them a launch.

With the current commercialisation process, many launching States may be identified for a single launch. The rockets may procure the launch

to more than one satellite. It is common to ask for a launch from another country just for commercial reasons.

It is only the beginning of it; this trend is of course increasing with the possibility to use private launcher from private facilities. Some very new situations are created with private launch from international domain like the Sea Launch project. If we add to that the fact that the private entities are most of the time international consortia bringing together companies from many countries the present issue get even more complicated.

Many commentators take the example of some extreme situations where the multiplicity of launching States seems to infringe common sense. It is indeed very easy to take the example of an Intelsat and an Indonesian satellite being launched by a Franco-Ukrainian rocket from the Russian facilities in Baikonur Kazakstan. You perhaps remember when we were discussing the Sea Launch case in Turin; I indicated the rather long list of every launching States or possible launching States. We were amazed of the great quantity of possible launching States.

Most of us would say: "what a mess"!

Indeed, but if we come back to the very purpose of the liability system of the OST and the Liability Convention we should also recognise that this plurality of liable States is very useful for the potential victims. It was the purpose of the system which, as we know is very much victim oriented. Victims can claim compensation from any of the launching States and will of course choose the most likely to pay thus increasing their chance to obtain real full compensation. I am quite aware of the fact that, as France is currently involved in half the commercial launches, my own country, will very often be asked to pay, specially when it will appear easier and more secure to sue it.

It would also be the case in the example of a launch from Kazakstan of a German University piggyback satellite. If Germany does not take every security to avoid having to pay for any potential damage caused by the whole launch, it is up to it. Given some obvious economic realities it is very foreseeable that in case of an accident Germany will be asked for compensation. They know that. They have to take care through an agreement with the launcher, to take out insurance or to accept the risk.

We must remember article V of the liability convention at the point 2.

"A launching State which has paid compensation for damage shall have the right to present a claim for indemnification to other participants in the joint launching. The participants in a joint launching may conclude agreements regarding the apportioning among themselves of the financial obligation in respect of which they are jointly and severally liable. Such agreements shall be without prejudice to the right of a State sustaining damage to seek the entire compensation due under this Convention from any or all of the launching States which are jointly and severally liable".

The agreement specified in this article is of major importance when many launching States are involved. If no agreement is concluded, any launching State, after having paid for the whole damage, may have to present a claim for compensation to the other participants. It would have to prove the fault of some other participants to the launch which may be very difficult in some cases.

As a conclusion to this first point, I would say that States must be aware of their possibility of being a liable launching State.[12] They should always conclude an international launching agreement when more that one State is involved. I would also advice the States to make a declaration if they fear to be considered a launching State. They can declare that they consider themselves as not being a launching State in a precise case. If no other State protests and discuss the point, the declaring State may have clarified the situation.

B States paying for private entities

Some commentators maintain that these rules are an unbearable burden for private launching and will prevent an evolution of commercial activities.

It is true that the absolute liability without any ceiling provided for in the Liability Convention is rather protective. It is also true that, given the fact that the liability is a joint and several one, any of the launching States should have to pay for the whole compensation. It is true as well that a State with a very limited involvement in the activity is as liable as the others are. (Kazakstan, Australia or France as territory of launch are launching States without any doubt and may in some cases have

little control over the launch or the satellite activity that will follow).

All that is true but we have to be aware of the fundamental "rationale" of the system. Neither the Outer Space treaty nor the Liability Convention decides who is going to pay for compensation in fine. They just put up a kind of safety net that will be used at the very end in case of an accident. The Launching States are the one to decide through their domestic law and regulations who is going to pay "in fine".

Let us imagine how a case will go on if an accident occurs. To be very close to the practical life I will take the example of a satellite being launched by some future Sea Launch launch. This spacecraft falls on the very new Mercedes of one of our colleague from the Netherlands. He will first go to the United States and ask the local judge to sentence Direct-TV the company owner of the satellite or Boeing to pay a considerable compensation for the lost of its beloved Mercedes. In that case he will use US law and not the Liability Convention, which only create a relation between States.

If he cannot obtain satisfaction and full compensation, he can then turn himself to the liability convention. He then must ask the government of the Netherlands to ask compensation according to the Liability Convention. Then the launching State status of the United States is to be proven, an easy task given the nationality of Direct TV and of the fact that Sea Launch is licensed under the US commercial space launch act 1984.[13]

The US government is not going to pay as Direct TV and Sea Launch have contracted an insurance to an amount which has been accepted by the US Department of Transportation. It is only if the amount of compensation exceeds what was determined by the US law i.e. $ 500 millions that the US State will have to pay.

This example shows that the amount of money a launching State is going to pay in fine in case of an accident is not fixed in the Liability Convention but in the domestic law or in a launching agreement. If a State is willing to help its launching industry by setting a low ceiling (in France the ceiling for Arianespace is 400 million Fr.) or by giving its own guaranty; it is up to it. The Liability Convention system should not be blamed. The State must know and accept the consequences of its action.

Possible launching States must issue a law or agreements in order to transfer the burden of the risk. If they do not, they may have to use ordinary way of law to get compensation from the private entities they are liable for. As France has currently no commercial space act, it should be difficult to get some money back if a French citizen orders a satellite to be launched from outside France and that France's liability is involved. States must be aware of the consequences of the treaties they accept.

Conclusion

My main concern is not the plurality of launching States but the opposite. If we try to look forward -say 5 years from now-, the competition within the launch industry and Space industry as a whole will increase the necessity for the competitors to avoid strict regulation. It is a consequence of the globalisation in every other field of activity. Why should it not be the same for outer space?

We have to be aware of the consequences of such an evolution.

The solution to avoid any real control should be to launch from a friendly little island or from the high sea; to register the space object in the same island or in another friendly one; to incorporate the companies under the same law; to put this island's flag on the rear of the ships, platform etc.

Doing so, the launching State, the appropriate State, the State of registry may be a State of convenience. Any space activity so organised would be under the domestic law and the control of this State. The international treaties and agreements applicable to these activities should be the treaties accepted by this State. Many of these solutions are already used in some other fields of activity for fiscal or financial reasons or just to avoid technical or social regulations.

We could imagine the consequences of such a system: let us just take the example of Sea activity and consider that after the launch there is no harbour where the ships must arrive and where territorial jurisdiction applies. The only solution European countries have found to avoid hazardous ships sailing near their coasts was to prevent them to enter their harbours.

But in Space there is no harbour, no more

territorial jurisdiction of any State, the only contact of a satellite with a State's territory is the crash. We must avoid an outer space where only Liberian looking law would apply and where only Liberian looking control would be in force. A few States could make some money from this new activity we should not encourage this drift.

The consequences should be dramatic should any space private activity be regulated in such a way. Regulation on telecommunication, television, the Internet, books and music, remote sensing activity, intellectual property rights, investments, taxation, interdiction of advertising for cigarettes, drugs, morality, gambling, violence, protection of childhood. And so on. The current process of globalisation should be nothing compared to the possibility of Space activities. When a satellite is launched there is little technical possibility to control it or stop it doing wrong.

It seems very important to maintain States' liability for private national activities like it is, according to Outer Space Treaty and Liability Convention. First of all because it is a major guaranty for the possible victims, but also because liability is connected with authorisation and control. If a State may be liable for an activity, it will take appropriate measures to ensure that this activity will be conducted seriously. Responsibility of article VI OST, liability of article VII and jurisdiction and control of article VIII are closely connected and should remain as they are.

These rules may be compared to constitutional law.[14] They are the basis. On the basis and respecting them, nice commercial activities may flourish. They would have to be aware of the rules and will enjoy full freedom within this framework. It is the only way for true liberalism, which cannot be anarchy.

NOTES :

[1] Information furnished in conformity with the convention on registration of objects launched into outer space (COPUOS) shows the possibility of change of registration: in the case of the Hong Kong satellites AsiatSat 1, Apstar-1 and Apstar-1A the registration has been changed with effect from 1 July 1997 from the UK registry to the Chinese one. The UK informed the Secretary General and ask him to "amend accordingly the Register of Space Objects"... ST/SG/SER.E/333. "*With effect from 1 July 1997, the space objects mentioned above ceased to be carried on the Register of Space Objects of the United Kingdom. Therefore, on that date the United Kingdom ceased to be the State of registry of those space objects for the purposes of the Registration Convention and 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. Please amend accordingly the Register of Space Objects maintained by the Secretary-General in accordance with article III of the Registration Convention*" The People's Republic of China registered the three satellites using the same wording (ST/SG/SER.E/334).

[2] Air and Space Law De lege ferenda T.L.Masson Zwaan and P.M.J. Mendes de Leon (eds) Essays in honour of Henri A. Wassenbergh (1992) p. 202-17.

[3] On that point see Manfred Lacks moot court competition 1999: the Mor Toaler case. (IISL proceedings 1999)

[4] Sea Launch User's guide, Boeing Commercial Space Company Seattle 1996 revised 1998.

[5] Commercial Space Launch Act of 1984 as Amended 1988 Public Law 98.575, 98th Congress, H.R. 3942, October 30, 1984. 98 Stat. 3055
(11) "United States citizen" means-
(A) Any individual who is a citizen of the United States;
(B) any corporation, partnership, joint venture association, or other entity organized or existing under the laws of the United States or any State; and
(C) any corporation, partnership, joint venture, association, or other entity which is organized or exists under the laws of a foreign nation, if the controlling interest (as defined by the Secretary in regulations) in such entity is held by an individual or entity described in subparagraph (A) or (B.)

[6] [Code of Federal Regulations Title 14, Volume 4, Parts 200 to 1199 Revised as of January 1, 1999 14CFR401.5 Sec. 401.5 definition.
Controlling interest means ownership of an amount of equity in such entity sufficient to direct management of the entity or to void transactions entered into by management. Ownership of at least fifty-one percent of the equity in an entity by persons described in paragraph (a) or (b) of this definition creates a rebuttable presumption that such interest is controlling.

[7] United Kingdom Act on Space Activities, Outer Space Act 1986:
"2) A licence is not required-
(a) by a person acting as employee or agent of another; or
(b) for activities in respect of which it is certified by Order in Council that arrangements have been made between the United Kingdom and another country to secure compliance with the international obligations of the United Kingdom."

[8] Australian Space Activities Act 1998:
Division 1—Certain space activities require approvals
12 Overseas launch requires an overseas launch certificate
If:(a) a space object is launched from a launch facility located outside Australia; and
(b) the launch is not authorised by an overseas launch certificate held by any person; and
(c) an Australian national is a responsible party for the launch; the Australian national is guilty of an offence punishable on conviction by: (...)

[9] On this particular issue and on many others addressed here see: Edward A Frankle and E. Jason Steptoe: *"Legal consideration affecting Commercial Space Launches From International Territory"* IAF/IISL colloquium Amsterdam 1999 IISL-99-4.02.

[10] Convention on the Registration of Objects Launched into Outer Space,
Article IV
1.Each State of registry shall furnish to the Secretary-General of the United Nations, as soon as practicable, the following information concerning each space object carried on its registry:
a. name of launching State or States;
b. an appropriate designator of the space object or its registration number;
c. date and territory or location of launch; (...)

[11] Satellite N-STARb launched from Kourou domestic telecommunications ST/SG/SER.E/308 8 may 1996

[12] As we saw in the Sea Launch LDC case and its connection with UK through Cayman Island, the rule was not alsways quite clear.

[13] Given the State to State relationship it should be more difficult to obtain compensation as the decision of the Claims Commission is not yet compulsory.

[14] See Pr. Joanne Irene Gabrynowicz Space power and law power in Space news vol 10 n° 29 july 26 1999 p.13