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Property Rights in Outer Space Law

Abstract. In the article the author first of all pays attention that the principle of not assignment of a space defines property rights in the international outer space law. At the same time the legal questions connected with differentiation of that is a subject of private activity in space and activity on behalf of the government demand studying and the analysis. The analysis of these questions is especially important in the light of formation of the private international outer space law, one of which central institutes is the property right. The author comes to a conclusion that interpretation of the relevant standards of the international outer space law could lead to a formulation of the special conflict bindings applicable in the private international outer space law.

Key words: property rights, international outer space law.

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Īpašuma tiesības kosmosa tiesībās

Anotācija. Rakstā autors, pirmkārt, pievērš uzmanību tam, ka kosmosa telpas nepiesavināšanas princips nosaka mantiskās attiecības starptautiskās kosmosa tiesībās. Tai paša laikā, izpēti un analīzi prasa tiesiski jautājumi, kas saistīti ar privātās darbības kosmosā nodalīšanu no darbības, kura tiek veikta valdības vārdā. Šo jautājumu analīze ir īpaši svarīga starptautisko privāto kosmosa tiesību veidošanas aspektā, jo viens no šo tiesību būtiskākajiem institūtiem ir privātīpašuma institūts. Autors nonāk pie secinājuma, ka atbilstošu starptautisko kosmosa tiesību normu interpretācija varētu radīt speciālu kolīziju normu formulēšanas, kuras būtu iespējams izmantot privātās kosmosa tiesībās.

Atslēgas vārdi: privātais īpašums, kosmiskā telpa, starptautiskās kosmosa tiesības.

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Право собственности в космическом праве

Аннотация. В статье автор, в первую очередь, обращает внимание на то, что принцип неприсвоения космического пространства определяет имущественные права в международном космическом праве. В то же время, требуют изучения и анализа правовые вопросы, связанные с разграничением того, что является предметом частной деятельности в космосе и деятельностью от имени правительства. Анализ этих вопросов особенно важен в свете формирования международного космического частного права, одним из центральных институтов которого является право собственности. Автор приходит к выводу, что толкование соответствующих норм международного космического права могло бы привести к формулированию специальных коллизионных привязок, применимых в международном космическом частном праве.

Ключевые слова: частная собственность, космическое пространство, международное космическое право.

The principle of non-appropriation of outer space defines property rights in international space law. Article II of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (further – the Outer Space Treaty) [13] establishes that «outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means».

In the application of this provision to the States Parties to the Outer Space Treaty no difficulties and discrepancies in interpretation arise. Problems arise in the context of extension (or non-extension) of this provision to the States non Parties to the Outer Space Treaty as an instrument of conventional international law, and non-governmental legal entities of the participating States. It appears that the provisions of the Outer Space Treaty, at least, its basic principles, assumed the shape of customary norms, because so far no state has protested against the principles established, in particular, in Article II. Since 1967, the states did not proclaim the sovereignty of the Moon and other celestial bodies [7, pp. 524–578], and have not otherwise tried to violate the prohibition of national appropriation. The situation with non-governmental entities is somewhat more complicated [11, pp. 20–22; 8, pp. 41–48; 14, pp. 78–92; 6, pp. 306–311].

In addition to the Outer Space Treaty, these issues are regulated in the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (further – Moon Agreement) [1] wherein Paragraph 2 of Article 11 repeats the provision of Article II of the Outer Space Treaty. Paragraph 3 of Article 11 of the Moon Agreement establishes directly: «Neither the surface nor the subsurface of the Moon, nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person».

Although as of January 1, 2015 the Moon Agreement came into effect for 16 states only, and eleven states signed but not ratified it, the significance of Paragraph 3, Article 11 of this Agreement is that its content may assist in better understanding of the Outer Space Treaty as a whole.

Some specialists in law ascertain that the prohibition in Article II of the Outer Space Treaty, applies only to national appropriation, but not to appropriation by private actors. It is difficult to

assent to this point of view, and the dissent is justified.

Article II of the Outer Space Treaty, should be interpreted in the light of other provisions of the Treaty, in particular Article I, according to which «outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies». Further still, we should take into account a logical sequence of acquisition of the property rights to a real estate in modern legal systems. Only the state can allow its legal entities and natural persons to have the right to property ownership inside its territory and abroad.

Within its jurisdiction the state regulates the process of acquisition of property rights to any given object. In regard to the property rights to an object outside the national territory, it requires recognition of this right by the state wherein the acquiring legal entity or natural person is registered. It should be noted that appropriation is the act of state. Historically appropriation of a territory in no man's land *(terra nullia)* has never happened irrespective of the state appropriation. Thus, it can be concluded that the prohibition of national appropriation established by Article II of Outer Space Treaty, extends to the appropriation by private actors as well.

Article VI of the Outer Space Treaty establishes the international responsibility of the State Parties to the Treaty for ensuring that national activities in exploration and use of outer space, including the Moon and other celestial bodies, is carried out in accordance with the provisions of this Treaty, and the activities of non-governmental legal entities should be carried out with authorization and under continuing supervision by the appropriate State Party to the Treaty. It appears that the states should take appropriate measures (for example, to revoke the license, as well as others, depending on the specific situation), if private actors declare appropriation of objects on the Moon or other celestial bodies. Unfortunately, the states have not taken any measures yet in relation to existing precedents of violation of this ban by non-governmental entities in their space activities.

For example, D. Hope, the Head of the company «Lunar Embassy», claims to be the owner of all the planets in the solar system (except Earth) and their satellites. In 1980, Hope filed a respective petition to the Court of California, and then to the US Supreme Court. He also notified of his claims the General Assembly, the governments of Russia, the USA, Canada, China and other states. No official denial and no countermeasures had been taken, and Hope began to sell land on all planets. And this is not the only example of fraud in this area. It is only natural to expect that the states should react to such situations and take certain measures to ensure compliance of all national activities with the principles of international space law. The Board of Directors of the International Institute of Space Law (IISL) recognize that other, different from the described above, commercial space activities on the Moon and other celestial bodies are not prohibited by international space law. Naturally, an integral part of a commercial space activity is the right of property – the central institution in the system of the law of things.

International space law regulates the right of ownership of space objects. Article VIII of the Outer Space Treaty provides that «ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth». According to paragraph 1 of Article 12 of the Moon Agreement, «States Parties shall retain jurisdiction and control over their personnel, vehicles, equipment, facilities, stations and installations on the Moon». These provisions provide the international legal basis for the implementation of respective rights by various owners of space objects, namely, by states, international organizations, legal entities and natural persons.

These legal standards are particularly important in view of the formation of private international space law, and taking into account that one of its central institutions is the right of ownership.

Perhaps the formulation «the ownership of space vehicles, equipment, facilities, stations and installations ... shall not be affected ...» would contribute to the solution of conflicting legal issues in determining such rights and their specific content with respect to *lex origins* (e.g., in the case

of international sale of space technology placed in orbit when traditional binding to the *lex loci solutionis* does not apply, and binding to the law of a seller is also not fully applicable). Thus, we can conclude that the interpretation of the relevant rules of international space law could lead to the redrafting of specific conflicting references applicable to private international space law.

The use of space technology raises a number of issues affecting international obligations of States. This may be demonstrated on example of Geostationary Sattelites (GEOS). A considerable part of geostationary orbit (GEO) (a circular orbit 35,786 kilometers above the Earth's equator) and radio spectrum necessary for the operation, are currently distributed among the States according to the principle of justice. Each State, in accordance with procedures adopted by the International Telecommunication Union (ITU), may assign the right to use its orbital positions and frequency to a legal entity. If the latter decides to sell his satellite, functioning in that location and at certain frequencies, to a foreign company (which recently has been happening increasingly more often), in addition to the issue of transfer of ownership rights, the question arises of the transfer of the satellite to the location and frequencies allocated to the State under which jurisdiction the company of the buyer functions (which is not always technically possible), or the State of the seller has to assign its orbital locations and frequencies to the State of the buyer, at least for temporary use.

In addition, in this situation the question also arises of the transfer of control over the satellite being sold and the change of its registration, as otherwise the international responsibility, including financial one will be borne by the State of the seller. The problem of reregistering of space objects has lately become extremely acute.

Researchers have identified two possible situations. If a new State of Registry is one of the launching States, the transfer of registration is possible. The precedent has already taken place with regard to satellites of Hong Kong, which State of Registry was the United Kingdom, when Hong Kong was returned to China. Satellites were launched from the Chinese territory, which determined the status of China as one of the launching States. In this case, re-registration was quite feasible.

If the State was not originally one of the launching States, it cannot register a space object, because according to Article I (c) of the 1975 Convention on Registration of Objects Launched into Outer Space the State (further – Registration Convention) [5] of registry is «a launching State on whose registry a space object is carried in accordance with article II». In this situation, the State of registry, being also a launching State, shall retain jurisdiction and control over the space object and its crew during their presence in outer space, including on a celestial body (Article VIII of the Outer Space Treaty). If a space object is sold while in orbit, the State of registry may encounter serious difficulties regarding control over the object and the company operating it.

In connection with problems described in the above situations, the UN General Assembly in Resolution 59/115 «Application of the concept of the 'launching State'» [6] dated on December 10, 2004 «further recommends that the Committee on the Peaceful Uses of Outer Space invite Member States to submit information on a voluntary basis on their current practices regarding on-orbit transfer of ownership of space object».

The analysis of problems arising in the course of transfer of ownership of space objects in orbit, allows tracing a certain interconnection between the change in relations to be regulated by private international space law (in other words, property and non-property relations with a «foreign element» involved in space activities) and international legal consequences for the respective States. This certainly reflects the specificity of regulated relations, to be more exact, the specificity of legal regulation.

The Outer Space Treaty does not prohibit the economic exploitation of the natural resources of the Moon and other celestial bodies, but, at the same time, does not contain clear rules governing this area of space activities. An attempt to eliminate uncertainty regarding the legal regime of natural resources was made in the Moon Agreement. This Agreement applies to the Moon and other celestial bodies of the solar system, other than Earth, and orbits around or other trajectories to or around the Moon and other celestial bodies (Article 1 and 2 of the Moon

Agreement). The Moon Agreement entered into force on July 11, 1984, but neither Russia nor the United States nor other leading states in the field of space activities have become Parties to it. The reason is a statement of Paragraph 1, Article 11 of the Moon Agreement: «The Moon and its natural resources are the common heritage of mankind».

This statement was included in the text of the Moon Agreement at the request of developing countries, but it created a heated debate. Paragraph 2 of the same Article repeats the principle established earlier in Article II of the Outer Space Treaty, namely the prohibition of national appropriation of the Moon and other celestial bodies in any way. Paragraph 3 establishes that natural resources where they are («minerals in place») are not subject to appropriation, and explains that «the placement of personnel, space vehicles, equipment, facilities, stations and installations on or below the surface of the Moon including structures connected with its surface or subsurface, shall not create a right of ownership over the surface or the subsurface of the Moon or any areas thereof». It appears that already extracted resources («minerals not in place») of the Moon and other celestial bodies are not subject to the regime of non-appropriation, and their further development and appropriation does not contradict the norms and principles of international space law.

Paragraph 5 requires from the States Parties «to establish an international regime including appropriate procedures to govern the exploitation of the natural resources of the Moon as such exploitation is about to become feasible». Paragraph 7 of the same Article sets out the objectives of the regime: the orderly and safe development of the natural resources of the Moon, rational management of those resources, the expansion of opportunities in the use of those resources; an equitable sharing by all participating States of the benefits derived from those resources, with particular consideration of the interests and needs of developing countries, as well as the efforts of those countries which have directly or indirectly contributed to the exploration of the Moon.

The phrase «equitable sharing» used in the context of this Article, seems quite difficult to implement, at least, it is difficult to imagine a «compromise' between «the interests and needs of developing countries», «efforts of those countries which have directly or indirectly contributed to the exploration of the Moon» and the claims of the remaining States Parties to the Moon Agreement.

Article 18 of the Moon Agreement provides for the convening of a conference of States Parties, which, in particular, may consider the implementation of Paragraph 5, Article 11 of this Agreement, taking into account relevant technological advances.

There is still no evidence that the exploitation of natural resources of the Moon has become a real possibility, and, accordingly, there is no reason to convene a conference by the UN Secretary-General on the establishment of international regime for the development of the natural resources of the Moon. We must recognize that there are plans of mining Helium-3 on the Moon, which delivery to the Earth can provide the need of the Earth in energy for more than 1,000 years. But before 2020, these plans cannot be implemented [7].

It should be noted that the principle of «common heritage of mankind» is contained in Article 136 UN Convention on the Law of the Sea of 10 December 1982 (further – UNCLOS) [15]. The Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea (further – Agreement) [2] was adopted in 1994. The Agreement reaffirmed «the principle of the common heritage of mankind» regarding the floor of the seas and oceans, and their subsoil resources beyond national jurisdiction, and with that marked «political and economic developments, including market-oriented approaches» that have stimulated the conclusion of this Agreement. The developed countries were against the severe restrictions imposed by provisions of Part XI of the UNCLOS regarding the use of the resources of the seabed and significant financial commitments in connection with the foundation of the International Seabed Authority.

After the Agreement came into effect, «reasonable commercial principles», referred to in Section b, Article 1 (a) of the Agreement, were laid at the basis of the development of seabed resources. A similar compromise could be reached with regards to the legal regime on the Moon and

other celestial bodies. In certain cases the legal regime of outer space may be compared with the legal regime of the high seas and that of the Antarctic. In general, it should be noted that in the development of the international regime for governing the exploitation of natural resources of the Moon and other celestial bodies it will be necessary to consider both a comparable international legal experience, and the specifics of regulated space activities, as well as strategic, economic and technical realities at the time of the establishment of such a regime.

Another urgent problem concerns the legal regime of asteroids. Opinions on the legal regime applicable to asteroids differ. Thus, some researchers believe that asteroids fall under the category of «celestial bodies» [12, p. 120], which, of course, exclude the possibility of their appropriation.

However, if we assume that asteroids do not belong to the 'celestial bodies», then in the future with the development of appropriate technologies and the creation of necessary legal regulation, they may become particularly attractive economically. For example, asteroid Cleopatra, size 217 x 93 km, located in the asteroid belt between Mars and Jupiter, is composed mostly of iron (88%), nickel (10%) and some metals of platinum group. For the time being this question remains open and requires further study.

Whether the necessary provisions will be included in the General Convention on Space Law, as proposed by Russia [9, pp. 483–486], supported by China, Ukraine, Greece and some other countries, or a separate agreement will be concluded, or the problem will be solved in some other way, one thing is clear – a respective international legal regime should be established before numerous international disputes and conflicts start to arise.

The problems outlined above are particularly relevant in light of the adoption of the Convention on International Interests in Mobile Equipment [4] and the Space Protocol [10].

References:

1. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies // Available: http://www.unooosa.org/pdf/publications_ST_SPACE_061Rev01E.pdf [last accessed 06.11.2014].
2. Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. // Available: http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm [last accessed on 10.05.2013].
3. Application of the concept of the «launching State». Available: http://www.unoosa.org/pdf/gares/ARES_59_115E.pdf [last accessed 29.11.2014].
4. Convention on International Interests in Mobile Equipment. Available: http://www.unidroit.org/english/conventions/mobile-equipment/mobile-equipment.pdf [last accessed 08.11.2014].
5. Convention on Registration of Objects Launched into Outer Space. Available: http://www.unooosa.org/pdf/publications_ST_SPACE_061Rev01E.pdf [last accessed 14.11.2014].
6. Ilie, M. The status of property rights in international space law // Contemporary Readings in Law & Social Justice, 2012, Vol. 4, Iss. 2.
7. Landry, B. A tragedy of the anticommons: the economic inefficiencies of space law // Brooklin Journal of International Law, 2013, Vol. 38, Iss. 2.
8. Lunar Settlements (Advances in Engineering Series). Haym Benaroya (Ed.). // Boca Raton, Florida: CRC Press, 2010.
9. Lyall F., Larsen P. Space law a treatise // Farnham: Ashgate Publishing, 2012.
10. Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment. Available: http://www.unidroit.org/english/conventions/mobile-equipment/aircraftprotocol.pdf [last accessed 11.11.2014].
11. Schrunk D., at al. The Moon: Resources, Future Development and Settlement (Springer Praxis Books / Space Exploration).// Chichester, UK: Praxis, 2007.
12. Smirnov D.L. Space exploration and natural resources of energy: international regulation.// Moscow Journal of International Law, 2006, No. 3.
13. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. Available: http://www.unooosa.org/pdf/publications_ST_SPACE_061Rev01E.pdf [last accessed 16.11.2014].
14. Turning Dust to Gold: Building a Future on the Moon and Mars (Springer Praxis Books / Space Exploration). Haym Benaroya (Ed.). // Berlin, Heidelberg, N.Y.: Springer-Praxis, 2010.
15. United Nations Conventions on the Law of the Sea of 10 December 1982. Available: http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm [last accessed on 08.05.2013].