

SPACE COMMERCIALISATION: ADDRESSING INTELLECTUAL PROPERTY ISSUES

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Abstract

What are the intellectual property issues in space commercialisation? How are the intellectual property issues in space matters being addressed? Do we have an appropriate legal framework or any regulatory mechanism? With the growing commercialisation of space, especially in the areas of telecommunications and remote sensing, the issues pertaining to intellectual property rights are now in focus. The protection of IPRs, most importantly, Patents, licensing, designs, trademarks, data protection and technology transfer, being capable of commercial exploitation have to be seriously dealt with. None of the Conventions and the International Agreements regarding space matters addresses the issue. An appropriate legal framework is the need of the hour. In the absence of a proper legal framework, resort must be taken to the available international and national laws relating to IPR. The focus of this paper would be to address the IPR issues that emanate from space commercialisation, particularly telecommunications and remote sensing; and to tackle these issues using the current international regime of IPR and trade, which is currently the WTO regime. The Trade Related Aspects of Intellectual Property Rights, popularly known as the TRIPs, being the

converging point for all intellectual matters, the IPR issues would be addressed in the light of TRIPs.

Introduction

Outer space has always been associated with something alien to a normal man. With the advent of satellites and rockets, a high-end technology status was attributed, still far away from the knowledge of the common man. Little do they know that the technologies developed by space technologies affect their day-to-day life in numerous ways. The prospect of commercialisation of space has brought about a new facet, "the applications of multi-areas of law", apart from science and technology, and has by far been quite ignored by the scientific community. Space lawyers have not so far found their hold due to lack of adequate legal ambit to govern space. The legal issue of intellectual property rights (IPR) in space activities has been brought to the limelight with increase in the private sector participation in space activities. The private players are more concerned about both protection and commercial exploitation of their intellectual efforts.

Intellectual Property Right and Space Activities

The space activities such as remote sensing from space and direct broadcasting, gain much importance in this era of privatization and commercialization. The pertinent Intellectual Property Right issues I am addressing are two fold; one copyrights and neighboring rights rules for cable transmissions and satellite broadcasting; and second legal protection of remote sensing data i.e. is whether remote sensing data could be protected under existing copyright law. This question is important in order to allow the controlled flow of the data gathered by remote sensing satellites and at the same time to stimulate private investments in remote sensing activities.

Neither the major international laws on Intellectual Property Right¹ nor the international legal instruments on outer space², specifically address the issue of

¹ Paris Convention for the Protection of Industrial Property, 1967; Berne Convention for the Protection of Literary and Artistic Works, 1971; WIPO Copyright Treaty (WCT), 1996; The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), 1994; Rome Convention on the Protection of Performers, Producers of Phonograms and Broadcasting Organisations, 1961

² Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (1967 Outer Space Treaty); Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects launched into Outer Space (1968 Rescue Agreement); Convention on International Liability for the Damage Caused by Space Objects (1972 Liability Conventions); Convention on registration of Objects Launched into Outer Space (1975 Registration Convention); Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (1979 Moon Agreement); The Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space (General Assembly resolution

Intellectual Property Right in space. Considering that the Intellectual Property Right do not have extra-territorial applicability, the national Intellectual Property Right laws will have to be extended for its application in space activities.

The only country that has enacted an explicit provision establishing a link between Intellectual Property Right and Space activities is the United States through Section 105 of 35 United States Code (Inventions in outer space)³. It

1962 (XVIII) of 13 December 1963); The Principles Relating to Remote Sensing of the Earth from Outer Space (resolution 41/65 of 3 December 1986); The Principles Relevant to the Use of Nuclear Power Sources in Outer Space (resolution 47/68 of 14 December 1992); The Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries (resolution 51/122 of 13 December 1996).

³ Section 105 of 35 U.S.C. (Inventions in outer space) reads as follows:

“(a) Any invention made, used, or sold in outer space on a space object or component thereof under the jurisdiction or control of the United States shall be considered to be made, used or sold within the United States for the purposes of this title, except with respect to any space object or component thereof that is specifically identified and otherwise provided for by an international agreement to which the United States is a party, or with respect to any space object or component thereof that is carried on the registry of a foreign state in accordance with the Convention on Registration of Objects Launched into Outer Space.

“(b) Any invention made, used or sold in outer space on a space object or component thereof that is carried out on the registry of a foreign state in accordance with the Convention on Registration of Objects Launched into Outer Space, shall be considered to be made, used or sold within the United States for the purposes of this title if specifically so agreed in an

provides quasi-territorial effect on a space object that is carried on the registry of the US, unless otherwise agreed by an international agreement. Moreover, the Proposal for the Council Regulation on the Community Patent⁴ provides that the Regulation should apply to inventions created in outer space, which are under the jurisdiction and control of one or more member States in accordance with international law. This paper does not intend to go into the issue of patents.

Satellite communication and broadcasting

With the radical development in the satellite transmission⁵ and reception technology, several legal issues, particularly the acquisition and protection of property rights have gained significance. As regards satellite broadcasting, inasmuch as a satellite transmitting signal is merely a conduit for Earth-based receivers, this would seem to constitute use on Earth, not in outer space.

Satellite transmissions now perform an increasing range of functions. In part they concern broadcasting activities. The

international agreement between the United States and the state of registry.”

See also Carl Q. Christol, "Protection of Intellectual Property Rights in Outer Space" in V.S.Mani, et.al, (eds.), *Recent Trends in International Space Policy* 363 (1997)

⁴ Issued by the European Commission, document COM(2000) 412, Brussels, 1st August 2000

⁵ As a result an international convention, known as the "Satellite Convention" was set in place in 1974. Brussels Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite (Unesco, WIPO), done at Brussels on May 21, 1974

Fixed Satellite Service (FSS) system⁶ and Direct Broadcasting by Satellite (DBS)⁷ system are the two modes of transmission and receipt. The extent to which these activities could be brought within the ambit of copyright should be looked into. The distinction between reproduction right and the performance right should be made in this regard. Broadcasting is an act of performance which accordingly requires dissemination to sufficient members before they are covered.⁸ The EU Satellite Directive⁹ requires "communication to the public by satellite to be part of the broadcasting rights given to authors and also those given to performers, sound recording producers and broadcasting organizations".¹⁰

With regard to direct television broadcasting (DTB), General Assembly adopted in 1982 the "Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting"¹¹, the first international instrument to deal specifically with the issues relating to direct broadcast satellites. Principle 11 of the resolution titled Copyright right and neighbouring rights, states that

⁶ Programmes from the satellite received by a station and are distributed through the cable system

⁷ Operate to individual receivers, like dishes, without the intervention of station or cable

⁸ W.R. Cornish, *Intellectual Property: Patents, Copyrights, Trademarks and Allied Rights* 528 (4th edn., Sweet & Maxwell 1999)

⁹ Satellite Broadcasting and Cable Retransmission Directive (Satellite Directive) 93/83, Sept. 27, 1993

¹⁰ Arts 1(2), 2, 4, *Id*

¹¹ UNGA Res. 37/92, Annex. ,10th December 1982

“International Instruments dealing with copyright are applicable to DTB and states shall co-operate with each other. In such co-operation they shall give special consideration to the interests of the developing countries”.

The TRIPs extends the general principles of national treatment¹² and most favoured nation treatment¹³ to broadcasting organizations. Part II, Section 1 specifically relates to “Copyright and Related Rights”. Article 9, which emphasizes its relation to the Berne Convention, states that the member countries shall comply with Articles 1 through 21 of the Berne Convention (1971) and the Appendix thereto. Broadcasting organizations are specifically dealt with under Article 14. It states that the broadcasting organizations shall have the right to prohibit the following acts, when undertaken without their authorization: the fixation, the reproduction of fixations, and the rebroadcasting by wireless means of broadcasts, as well as the communication to the public of television broadcasts of the same. When countries do not grant such rights to broadcasting organizations, they shall provide owners of copyright in the subject matter of broadcasts with the possibility of preventing the above acts, subject to the provisions of the Berne Convention (1971)^{14, 15}. The term of protection granted is for at least 20 years¹⁶.

¹² Art. 3, TRIPs

¹³ Art. 4, TRIPs

¹⁴ Art. 11 *bis*, Berne Convention

¹⁵ Art. 14(3), TRIPs

¹⁶ Art. 14(5), TRIPs

Intellectual Property Right and remote sensing

The intellectual property issue in remote sensing is the copyright protection of data. Remote sensing consists of both primary and processed data. The processed data is what is protected under copyright. Under the national laws on copyright of most countries, databases that constitute an intellectual creation by reason of the selection or arrangement of its contents are protected. While a particular kind of database might be protected under copyright in some countries, a similar database might not qualify for copyright protection in other countries. This depends on the level of originality required under the copyright law of a particular jurisdiction. Databases that contain comprehensive information without selection in a straightforward manner, such as alphabetical or numerical order, may not be protected under copyright in all countries. This is why certain countries have extended intellectual property protection to such databases through a *sui generis* regime. Other models of protection are also available, such as unfair competition or misappropriation laws.¹⁷

Copyright protection of original databases is well established and harmonized through international treaties to that effect, such as the Berne Convention, the TRIPs Agreement and the WCT. Article 10 of the TRIPs specifically deals with Compilations of Data. Compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their

¹⁷ “Intellectual Property and Space Activities”, *Issue paper prepared by the International Bureau of WIPO*, April, 2004

contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself.¹⁸ Databases acquire protection under Berne Convention, to the extent that they constitute intellectual creations.¹⁹

At regional level, EC Database Directive on the Legal Protection of Databases²⁰ grants a “sui generis” right to database makers to protect their investment of time, money and effort to establish a database, regardless of whether the database is in itself innovative. The Database Directive²¹ first defines what is meant by a database²² and then allows copyright in a database on the basis of authorship involving personal intellectual creativity. At national level, the copyright law of Mexico and the Korean Copyright Act of 2003 contain provisions on protection of non-original databases.²³

Conclusion

Even though, space commercialization is on a rise, it has not been attracting the optimum number of private investors. This is mainly because, on one hand

many of the space faring nations, still haven't got appropriate national space legislations and on the other hand, there is a lack of proper protection for their intellectual property. As analysed in this paper, as far as the issues of IPR protection of satellite transmission, broadcasting and remote sensing data, the existing regime could be adequate. However, this would not be sufficient for the private players to be convinced about the adequacy of protection when other IPR issues like trademarks, patents, licensing technologies, etc come into picture. While, for the time being, the space community tries to accommodate space activities into the present legal framework on one hand, it should simultaneously make all efforts to develop an adequate legal framework exclusively for IPR and space activities. Such a legal mechanism should take into account all the relevant issues in the present IPR regime and should be consistent with them. Since the uniqueness in the space activities lies in its extraterritoriality and that of IPR in its territoriality, an altogether separate jurisprudence will have to evolve in merging the two. The space community, especially the space legal institutions, lawyers and academicians should work towards this end.

¹⁸ Art. 10 (2)

¹⁹ Art. 5, Berne Convention

²⁰ The Directive 96/9/EC of the European Parliament and of the Council of March 11, 1996,

²¹ Ibid

²² Data base is defined as “a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means”.

²³ *Supra* n.17.