THE INTERGOVERNMENTAL SPACE STATION AGREEMENT AND INTELLECTUAL PROPERTY RIGHTS

R. Oosterlinck*

Introduction

This presentation deals with the provisions concerning Intellectual Property Rights foreseen under the Intergovernmental Agreement concluded on September 29, 1988, among the Government of the United States, Governments of Member States of the European Space Agency,[1] the Government of Japan and the Government of Canada on the cooperation in the detailed design, development, operation and utilization of the permanently manned civil Space Station.

Before going to the Intellectual Property Rights provisions it might be useful to recall briefly the legal construction and instruments governing this cooperation and its goal. The object of the cooperation is to establish a long term international cooperative framework for the

* European Space Agency, Directorate of Administration.

The views expressed herein are those of the author and do not necessarily reflect the views of the European Space Agency.

1. The European Space Agency (ESA) was formed by a Convention which was opened for signature on 30 October 1980. The organization was established for exclusively peaceful purposes to provide for and to promote, cooperation among European States in Space research and technology and their applications. The Agency has 13 Member States; the Federal Republic of Germany, Belgium, Denmark, Spain, France, Ireland, Italy, Norway, The Netherlands, The United Kingdom, Sweden, Switzerland, and Austria. The contribution of ESA in the Space Station is carried out through the Columbus programme, undertaken as an optional program in which Member States participate, except Austria, Ireland, Sweden, and Switzerland.

detailed design, development, operation and utilization of a permanently manned civil Space Station.[2]

The Space Station will be a multi-use facility in low earth orbit comprised of a permanently manned base, a man tended free flying laboratory, two unmanned platforms in near polar orbit and Space Station unique ground elements.[3]

Legal framework

For the purposes of the present study, it will be sufficient to describe in general terms the legal framework governing the above cooperative agreement. The legal framework comprises three different legal instruments: first of all, the Intergovernmental Agreement (IGA) itself which is signed by States and is thus a multilateral agreement among States (12 Signatories but four Partners, USA, European States, Canada, Japan); Secondly, three bilateral Memoranda of Understanding (MOU) concluded between "cooperating agencies"; and, thirdly, Implementing Arrangements which complement them,

The respective cooperating agencies foreseen in the IGA (Art. 4) are NASA for the USA, ESA for the European Governments, and the Ministry of State for Science and Technology (MOSST) for the Government.

---

2. For a more detailed survey of the legal considerations, see Lafferranderie, *La Station Spaciale* in DROIT DE L'ESPACE 157--196 (Pedone ed. 1988).

3. Agreement Among the Government of the United States of America, Governments of Member States of the European Space Agency, the Governmant of Japan and the Government of Canada in cooperation in the Permanently Manned Civil Space Station, signed Sept. 29, 1988, with Annex (hereinafter "Treaty").

1) The Government of the United States, through NASA, shall provide: Space Station infrastructure elements, including a habitation module; as user elements, a laboratory module for the manned base (including basic functional outfitting), attached payload accommodation equipment for the manned base, a polar platform; and Space Station-unique ground elements.

2) The European Governments, through ESA, shall provide:
as user elements, the Attached Pressurized Module for the manned base (including basic functional outfitting), a Man-tended Free Flyer which will be serviced at the manned base, a polar platform; and Space Station-unique ground elements.

3) The Government of Japan shall provide:
as a user element, the Japanese Experiment Module for the manned base (including basic functional outfitting, as well as the Exposed Facility and the Experiment Logistics Modules), and Space Station-unique ground elements.

4) The Government of Canada, through MOSST, shall provide:
as Space Station infrastructure elements, the Mobile Servicing Center (MSC), the MSC Maintenance Depot, the Special Purpose Dexterous Manipulator and Space Station-unique ground elements.

of Canada. The Government of Japan shall sign itself the MOU with NASA and will designate by that time its cooperating Agency.

The object of the MOU's concerns the detailed design, development operation and utilization of the Space Station. The Implementing Arrangements are to be concluded for the execution of the respective MOU's.[4, 5, 6] The legal framework is thus a three layer construction with the Intergovernmental Agreement (IGA) on top followed by the Memoranda of Understanding (MOU) subject to the IGA and finally implementing arrangements subject to the MOU's. The complexity of the legal structure is fully justified by the fact that the cooperative agreement will govern a multi-billion dollar project to be spread out over more than 20 years.

Intellectual Property Rights

Confusion frequently exists in the minds of jurists when discussing "intellectual property matters". Depending on the country from which they come, jurists will use this term for designating copyright and related issues, and will use the term "industrial property" when speaking on inventions and patents. Strictly speaking, however, "intellectual property" is a generic term comprising mainly but not exclusively patents, copyrights, trademarks, trade secrets and unfair competition.

During the negotiations of the IGA, several definitions have been proposed so as to define unambiguously "intellectual property rights". The definition given in Article 2 of the Convention establishing the World Intellectual Property Organization (WIPO) has been retained. In order to avoid possible change of this definition by further amendments of the

4. Treaty, *supra* note 3, at art. XXV. The entry into force of the IGA is not expected to take place before mid-1989.

5. Treaty, *supra* note 3, at art. I. In order to be in a position of signing the MOU's foreseen under art. IV of the IGA, US, Europe and Canada also signed an arrangement pending entry into force of the IGA.

6. Treaty, *supra* note 3, at art. IV. ESA/NASA MOU entered into force on 14 November 1988.

WIPO Convention, it has been agreed that Article 2 of the Stockholm Convention of July 1967 is the only one to be taken into consideration.[7]

As far as intellectual property and the space station is concerned, the main issue to be considered will undoubtedly be related to patent rights although the other components, in particular copyrights, should not be neglected.[8, 9]

A patent is an agreement between a State and an inventor. In return for a full public disclosure of the invention, the inventor is granted the right for a fixed period of time to exclude others from making, using or selling the invention on the territory of that State. The primary purpose is to encourage a public disclosure of the invented subject matter. The violation of the patent rights of an inventor is called infringement. The infringement results from an unauthorized making, using, selling and in some countries, importing the patented invention.

A basic principle of patent law is that the rights granted are limited in scope, time and space. In particular, the fact that an invention is only protected in the territory of those countries in which a patent has been granted is in the context of the Space Station, the most important element, *e.g.*, an invention made in Belgium but only patented in the USA means that in all countries (including Belgium), except in the USA the invention may be used freely. The process for obtaining a patent is very costly; therefore, inventions are normally protected only in those countries where either manufacturing or extensive use is expected to take place.

Since according to the "Outer Space Treaty" of 1967 (referred to in Art. 2 of the IGA) outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means, the question arises which law should be applied in the absence of a territory in outer space for governing intellectual property matters? As

---

7. Treaty, *supra* note 3, at art. XXI. The Convention Establishing the World Intellectual Property Organization (WIPO), concluded in Stockholm on July 14, 1967, by providing that "Intellectual Property shall include rights relating to:

[1] literary, artistic, and scientific works;
[2] performances of performing artists, phonograms, and broadcasts;
[3] inventions in all fields of human endeavor;
[4] scientific discoveries;
[5] industrial designs;
[6] trademarks, service marks, and commercial names and designations;
[7] protection against unfair competition;

and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields."(Art. II(viii)).

8. Oosterlinck, *Intellectual Property and Space Activities,* PROC. 26TH COLLOQ. L. OUTER SPACE 161-64 (1983).

9. Oosterlinck, *Legal Protection of Remote Sensing Data,* PROC. 27TH COLLOQ. L. OUTER SPACE 112-28 (1984)).

yet, no specific intellectual property law applicable in outer space is available. The only solution is the transposition of national law to outer space. In order to guarantee legal security, it will be necessary that commercial entities be able to determine in advance the law applicable to patents.[10] One possible solution is to use connecting factors similar to the ones used in the case of private international law.

Nationality

One potential connecting factor is "nationality". One could either consider the nationality of the inventor or the nationality of the person or entity who financed the experiments from which the invention resulted.

The problem with the nationality of the inventor is that in some countries that are part of the IGA, no difference is made between nationality and domicile. In fact, in the UK the notion of nationality in private international law is less important than domicile which in most cases will be the connecting factor.

Another problem with which we are faced when considering the inventors' nationality as a connecting factor is what happens if the invention is made by a team composed of members of different nationalities. The only possible solution would be that prior to the launch, agreements amongst the crew would be set up to deal with this matter. One can, however, easily understand that such an approach would be very cumbersome, and in many cases would lead to legal uncertainty. A second possibility would be to consider the nationality of the person or entity who financed the experiment. *e.g.*, if a French company finances an experiment from which an invention results, French patent law would be applicable to this invention.

However, the nationality of commercial firms is difficult to establish. In some countries, the nationality is not the most important factor, *e.g.*, under English law, the residence is generally the connecting factor between a corporation and the governing legal system. Moreover, although the nationality approach could eventually solve problems linked to the applicable law for the securing of patent rights, it is entirely inappropriate for dealing with infringement issues. Under this legal construction the place where the infringement takes place is irrelevant for sueing an infringer; only the nationality of the latter will be the

10. Hoover, *Law and Security from the Viewpoint of Private Industry*, 11 J. SPACE L. 115 (1983).

The intellectual prxoperty of private industry is vital to its existence. To the extent that the right to retain and protect technology is diluted or lost, the industry will be weakend or destroyed. Thus a vital issue of security to private industry in its outer space activities is its ability to maintain its proprietary position. *Id.* at 122.

determining factor. This approach is totally contrary to the fundamentals of patent law itself.

As mentioned above, patents are generally taken out in those countries where one could expect production or exploitation to take place. For high-tech issues the choice is normally straightforward and will be limited to some industrialized countries. For inventions made in outer space which can only be used or made in outer space, the situation is totally different.

Consider the following example: an invention made in outer space has been patented in France, Germany, Belgium, and Italy. If the nationality is the determining factor, this would mean that the same act taking place at the same location will be qualified an infringement if it is a French astronaut who uses the invention but not if it is a Norwegian astronaut! It is evident that industry could thus select its astronaut on nationality so as to avoid infringments! This selection process could also apply to the nationality of a firm. If a specific task is to be performed in outer space a firm could be set up having the nationality of a country in which no legal protection has been secured for the invention.

Territory

A second approach is the territorial approach. Under this system the Space Station activities with regard to intellectual property are deemed to take place in a certain territory on earth.

The most simple way would be if only one law were applicable to the Space Station. Since the U.S. is the biggest financial contributor to this venture, one could logically conclude that U.S law schould apply.This solution envisaged by some U.S. jurists is unacceptable to the other partners for reasons linked to obtainment of patent rights as well as to possible infringement issues.

The securing of patent rights in the U.S. differs considerably from all other countries in that the first to invent principle is applied whereas in the other countries the first to file principle applies. Under the "first to file" system the patent will be granted, provided that all other requirements are fulfilled, to the one who first filed a patent application for the invention. Whereas, under the "first to invent" system the patent will be granted to the first and true inventor. In practice, the date of filing a U.S. patent applicaton is considered the date of invention. If necessary, however, the inventor may swear back to an earlier date which must be proved by convincing evidence, *i.e.*, lab notebooks, records, etc.

The "first to invent" principle is in itself not an unfair system. The only difficulty lies in proving that an inventor is the first inventor. However, the fact that U.S. patent law requires that an invention made abroad establish the effective date of invention is unacceptable in the context of the space station since this would automatically put an inventor

who made the first steps towards his invention in the U.S. in a better position.[11]

A supplementary problem resides in the fact that the U.S. Invention Secrecy Act provides that if an invention is made in the U.S. a person may not file an application for a patent in a foreign country unless he has either filed a patent application in the U.S. and waited six months or obtained a license to file abroad from the Commissioner of Patents and Trademarks. This provision is not to be condemned since limitations of the freedom to file in any other country immediately after having filed an original patent application also exists in other countries; *e.g.*, in France where Art. 77 of the Penal Code provides that whoever discloses to a foreign state information concerning an invention without prior approval is subject to imprisonment for 10 to 20 years.[12,13]

Notwithstanding the fact that similar provisions exist in most countries, the application of a unique patent law would mean that the officials of that country could, for reasons peculiar to their security policy, classify patent applications irrespective of the fact that the invention was not conceived nor reduced in practice in that country, nor was the invention or the one who financed the invention a resident in that country. It is easy to understand that the above consequences made the application of a unique national law impossible.

An even more important consideration that is counter to a single national patent law is evidenced in litigation procedure in infringement cases. If only one law applies, it would be sufficient to file one patent application only in that specific country; *e.g.* if U.S. patent law were selected as the patent law, all conflicts would be dealt with in the United States which would undoubtedly lead to higher expenditures for foreign entities, and the possibility of jury trial foreseen under U.S. law applicable to patent issues could lead to unexpected amounts to be paid to the patent owner.

The final solution retained by the IGA is a multi-territorial approach slightly adapted to avoid problems based on nationality for

---

11. 35 U.S.C.A. para. 104: "In proceedings in the Patent and Trade Mark Office and in the Courts, an applicant for a patent, or a patentee, may not establish a date of invention by reference to knowledge or use thereof, or other activity with respect thereto, in a foreign country,..."

12. Art. 77 of the Code Penal:

"Sera punit de la détention criminelle à temps de dix à vingt ans tout Francais ou étranger qui sans autorisation préalable de l'autorité compétente, livrera ou communiquera à une personne agissant pour le compte d'une puissance ou d'une entreprise étrangère soit une invention intéressant la defense nationale, soit des renseignements, études ou procèdes de fabrication se rapportant à une invention de ce genre ou à une application industrielle intéressant la défense nationale."

13. Provisions to bar an invention from filing a foreign patent application because the disclosure is considered detrimental to national security exist in almost all countries. For instance, articles 24 to 27 of the French Patent Law provide for means to safeguard the interest of national security.

obtaining patent rights and to avoid changing the current regulations in force (in particular in the U.S. where the IGA will be an Executive Agreement). In application of Art. 21 an activity (as far as intellectual property is concerned) ocurring in or on a Space Station element, excluding Extra-Vehicular Activities (EVAs), shall be deemed to have occurred only in the territory of the Partner State of that element's registry, except that for ESA-registered elements, any European Partner State may deem the activity to have occurred within its territory.[14,15]

This fiction is also considered under U.S. domestic law where in application of the Patents in Space Act the application of the U.S. patent law will be extended to activities occurring on U.S. aeronautical and space vehicles.[16] This fiction has also been applied or mentioned in patent litigations (Appeal Board). Several of these suits have dealt with the question of whether an invention was conceived or actually reduced to practice within the United States. In a case concerning a process for obtaining oxygen from extraterrestrial materials containing iron-bearing oxides on the moon, the Appeal Board stated that the process to be carried out on the moon by personnel subject to its jurisdiction, is not inimical and at variance with the indicated section of statute.[17] In order to avoid the limitations imposed by national security, the third paragraph of Art. 21 provides that in respect of an invention made in or on any Space Station flight element by a person who is not its national or resident, a

14. Treaty, *supra* note 3, at art. 21 para. 2.

Subject to the provisions of this Article, for purposes of intellectual property law, an activity occuring in or on a Space Station flight element shall be deemed to have occured only in the territory of the Partner State of that element's registry, except that for ESA-registered elements any European Partner State may deem the activity to have occurred within its territory. For avoidance of doubt, participation by a Partner State, its Cooperating Agency, or its related entities in an activity occuring in or on other Partner's Space Station Flight Elements shall not in and of itself alter or affect the jurisdiction over such activity provided for in the previous sentence.

15. *Id.* For the time being there is no European patent law. This may change with the introduction of an EEC patent which would be a unique title enforceable in all EEC Member States. There remains however, the problem that not all ESA Member States are EEC Member States.

16. H.R. 1510, Cong. Rec., Oct. 5, 1988, p. H9669. "Patents in Space Act", Chapter 10, title 35 provides under para. 105 that "any invention made, used or sold in outer space on an aeronautical and space vehicle as defined in section 103(2) of the NASAct under the jurisdiction or control of the United States shall be considered to be made, used or sold within the United States for purposes of this title with respect to any space vehicle or component thereof that is specifically identified and otherwise provided for by an international agreement to which the United States is a party."

17. *See* 200 U.S.P.Q. 324-327.

Partner State shall not apply its law concerning secrecy of invention so as to prevent the filing of a patent application.

Since the solution reached under section 2, Art. 21, para. 2 results in the fact that any act is deemed to take place simultaneously in all European Partner States, some limitations should be introduced for infringement cases. One could, for example, imagine that in the previous example an invention is protected by a patent in France, Germany, Belgium, and Italy. If infringement of this patent takes place in ESA's element, the infringer could be sued in all the countries for the one unlawful act. In order to circumvent this, para. 4 provides that if intellectual property is protected in more than one European Partner State, the Patentee may not recover in more than one such State for the same act of infringement. In other words, it is up to the patent right owner to determine in which country he wishes to start an infringement procedure.

In many cases, however, patent rights in different countries for one invention do not belong to the same person or entity. It could well be that in the above example the patentee has retained his rights in France but licensed them to three different licensees in the other countries. In this case the infringer could only be sued once the question of who is entitled to recover damage resulting from infringement is settled. The solution retained in the IGA is essentially a first come first-serve system.

Where the same act of infringement in or on an ESA-registered element gives rise to actions by different intellectual property owners, a court may grant a temporary stay of proceedings in a later filed action pending the outcome of an earlier filed action. And if satisfaction of a judgment is rendered for damages in any of the actions, this shall bar further recovery of damages in any pending or future action for infringement based upon the same act of infringement (Art. 21, para. 4 second sentence).

The above wording (*i.e.* "may") leaves the granting of a temporary stay to the judge's discretion. In other words, it will not necessarily be the one who first sued who, in the end, will be compensated for damage or loss suffered. In order to avoid uncertainty, it will be mandatory to introduce adequate provisions of Member States into the national legislation of ESA. In particular, it would be unacceptable to let different patent right owners file multiple infringement actions when the one for which a national judge will render a final decision will be compensated.

A special provision concerning licenses is given in para. 5. No European Partner State shall refuse to recognize a license if that license is enforceable under the laws of any European State, and compliance with the provisions of such license shall also bar recovery for infringement in any European Partner State. This provision prohibits litigation between patents right owners in different States for the same invention.

At first sight, these provisions may appear to result in an unsatisfactory settlement; *e.g.*, take the above case where three licenses

have been granted for the same invention, yet only one of the licensees will recover damages from infringement and, thereby, will automatically exclude the others from recovery. If one considers, however, that infringement takes place in outer space and that only the ficton of the infringement taking place on earth has made it possible to sue the infringer, one can only conclude that the patent rights which, in the first place, have been granted for activities within the boundaries of the respective State where patent rights have been secured are still totally valid and that the only difference is that the one who has sued successfully has gained something up and above his original rights!

Also as far as patentability is concerned, the provisions under Art. 21 have practical consequences. If use, sale, or knowledge of an invention occur strictly on a US flight element this would bar patentability in the US; however, if the same activity occurs on a non-US element, the patentability would not necessarily be affected. The important legal consequence of this territorial approach as far as patentability is concerned is that it applies regardless of nationality. Thus, a US citizen on a ESA flight element would be subject to the same legal interpretations as a non-US citizen, and these would be based on the theory that the relevant activities occured outside the United States.

Two main contraints imposed by the different Partners are:

(i) the IGA should not result in a change in laws presently in force, and
(ii) the jurisdiction and control principle should be applied.

This construction foreseen under the IGA, is the best construction under positive law. However, it is still far from satisfactory. In particular, problems will arise when an invention can only be used in outer space. For those cases it should be clear from the outset that acts of infringement will be limited to use or making and that selling is for the moment excluded.[18] One could however envisage other cases where patented products can only be manufactured in space, but will be used on earth where they will be put on the market. In such cases this selling will be ruled by normal national patent law to which the fiction would not apply.

Take the following example: a pharmaceutical product which can only be manufactured in outer space has been invented. The question which will arise is which patent policy should be applied by the inventor (firm).

At first sight, one could conclude from Art. 21 that it would be sufficient to file a patent application in only one European Partner State, such as, for instance, France. Then a German firm wants to use the invention regardless of the fact that this firm has never had any activity

18. Treaty, *supra* note 3, at art. IX, para. VII. Notwithstanding the fact that a Partner has the right to barter or sell any portion of their respective allocation.

in France nor intend to have any in the future. The fact that the invention is used on the ESA registered element will automatically result in an infringement in France and the German firm could be sued in France. For manufacturing in outer space, one patent could thus be sufficient.

The problem, however, is that once the product has been manufactured it will be sold on earth, and legal protection at present will now only be available in those countries where the product has been patented. It is paradoxical that although the processing of the pharmaceutical product took place fictionally in all European Partner States, the French patent prohibits any firm from other ESA States to manufacture the product. Note that actual selling of the product will only be an act of infringement through importation if the product is patented in the different States. Therefore, it is important to file a patent application in those countries where one expects to do business to insure proper protection.

The whole fiction of Art. 21 is based on the registration of space objects in application of Art. VIII of the Outer Space Treaty. Many definitions of the term "space object" have been proposed, though there is still no official definition. Until recently the U.S. interpretation was that an object launched in space only qualifies for a space object if it is capable of free flying. A Spacelab, for example, which was an integrated part of the shuttle was not considered by the U.S. as being a space object, and could therefore not be registered separately.[19, 20]

Some authors give an attributive character to the registration, thereby admitting that through registration of a space object by a State, laws of that State could be applicable on that space object.[21] A similar approach has been used for ships and aircraft whereby the registration determines to some extent the applicable law. The rationale behind this approach is that since ships and aircraft are moving from one State to another, the legal status would change continuously. This approach, however, is debatable for objects launched into outer space since contrary to what is the case for ships and aircraft, an object in outer space does not cross any frontiers. But, according to others, the registration is only declaratory in that the legal status on the space object or personnel thereof is not altered by the launching into outer space of this object.

---

19. Bourély, *Legal Regime of International Space Flight: legal issues relating to flights or the SpaceLab* in THE SPACE SHUTTLE AND THE LAW 73-76 (Stephen Gorove ed., Monograph Ser. No. 3. Univ. Mississippi Law Center, 1980).

20. Sloup, *Legal Regime of International Space Flights: Criminal Jurisdiction and command authority aboard the Space Shuttle/SpaceLab* in THE SPACE SHUTTLE AND THE LAW 72-92 (Stephen Gorove ed., Monograph Ser. No.3. Univ. Mississippi Law Center,1980).

21. R. OOSTERLINCK, REGISTRATION AND LAW APPLICABLE TO ACTIVITIES CARRIED OUT IN OUTER SPACE, (to be published in 1989).

The provisions of section 2, Article 5 of the IGA "Registration Jurisdiction and Control"[22] is a major step forward in resolving problems linked to registration. It first establishes that elements, whether free flying or not, are capable of being registered, provided they are identified beforehand. Furthermore, jurisdiction and control of a Partner is not limited to the elements has registered, but it extends over personnel who are its nationals irrespective of whether they are on an element which has been registered by another Partner. This approach leans towards the declaratory action of Art. VIII of the Outer Space Treaty in some respects.[23]

The last paragraph of Article 21 concerns the temporary presence doctrine. This doctrine provides for certain limitations on exclusive rights in cases where ships, aircraft or land vehicles temporarily visit foreign countries. Such temporary presence is not considered an infringement of the rights of a patentee. This doctrine is based on Article

22. Treaty, *supra* note 3, at art. V, para. 2:

"Pursuant to Article VIII of the Outer Space Treaty and Article II of the Registration Convention, of 1974 each Partner shall retain jurisdiction and control over the elements it registers in accordance with paragraph 1 above and over personnel in or on the Space Station who are its nationals. The exercise of such jurisdiction and control shall be subject to any relevant provisions of this Agreement, the MOUs, and implementing arrangements, including relevant procedural mechanisms established therein."

23. Article VIII of the Outer Space Treaty of 1967 provides:

"A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof while in outer space or on a celestial body..."

In application of Article VIII the State on whose registry the object is carried has jurisdiction over all persons on the object irrespective of their nationality.

5 of the Paris Convention to which all Partner States are a party.[24] In fact, section 6 of Art. 21 of the IGA rephrases the wording of Article 5 by explicitly including space objects as "aircraft or land vehicles".[25]

A last provision concerning intellectual property rights is found under Article 16 which deals with cross-waiver of liability. The objective of this Article is to establish a cross-waiver of liability by the Partner States and related entities in the interest of encouraging participation in the exploration, and use of outer space through the Space Station. This cross-waiver of liability is, however, explicitly excluded for intellectual property claims (Art.16.3.d.4).[26] The provisions of this article emphasize the importance of defining the applicable law concerning intellectual property for space activities and for infringement cases, in particular.

One final remark can be made on the absence of an authorization and content clause. In the past such a clause has been used in cooperative agreements. The advantage of it being that if such a clause is foreseen

---

24. *See* art. 5 ter of the Paris Convention for the protection of industrial property.

"In any country of the Union the following shall not be considered as infringements of the rights of a patentee....:

[2] the use of devices forming the subject of the patent in the construction or operation of aircraft or land vehicles of other countries of the Union, of accessories of such aircraft or land vehicles, when those aircraft or land vehicles temporarily or accidentally enter the said country."

See also the US Patent Law under which the application of the temporary presence doctrine is explicitly foreseen. USC 35 Patents; Pub. L. 96-517, para. 272, Temporary presence in the United States: "The use of any invention in any vessel, aircraft or vehicle of any country which affords similar privileges to vessels, aircraft or vehicles of the United States, entering temporarily or accidentally, shall not constitute infringement of any patent, if the invention is used exclusively for the needs of the vessel, aircraft or vehicle and is not sold in or used for the manufacture of anything to be sold in or exported from the United States." See also NASA Authorization Act 1982, Pub. L. 97-96 Dec. 21 1981, sec.7, adding a new subsection to the National Aeronautics and Space Act of 1958, Section 305:
"(k) Any object intended for launch, launched or assembled in outer space shall be considered a vehicle for the purpose of section 272 of title 35 United States Code."

25. Art. 21, para. 6: The Temporary presence in the territory of a Partner State of any articles, including the components of a flight element, in transit between any place on Earth and any flight element of the Space Station registered by another Partner State or ESA shall not in itself form the basis for any proceedings in the first Partner State for patent infringement.

26. *See also* 53 Fed. Reg. 45095-45096 (to be codified at 48 CFR. pts. 1828 & 1852):

"Since the obligation of the United States Government under the International agreement is effective now, it is an urgent and compelling matter to place the cross waiver liability clause to appropriate NASA contracts and subcontracts. Therefore this rule is issued as an interim rule to require its immediate use."

under US law,[27] any suit for infringement of a patent based on the manufacture or use of a patented invention for the Government by a contractor or by a subcontractor (including lower tier subcontractors) can be maintained only against the Government and not against the contractor. The liability of the Government for damages in any suit against it may, however, ultimately be borne by the contractors. The patentee's remedy against the Government shall, however, be limited to reasonable compensation.

Conclusion

Since outer space is not subject to national appropriation, it is difficult to accept that national laws can be applicable to activities carried out in outer space. To reconcile this the fiction that these activities are taking place on earth has been introduced. For the time being this approach will be sufficient but when activities in outer space increase it will be necessary to look for other solutions. One solution would be to draft a Convention on "Intellectual Property - Space Law". Under this Convention, outer space would be considered as one territory for which patents would exist and whose effect would be limited to outer space. This territorial approach could of course only be developed if all nations recognized an intergovernmental organization, such as the World Intellectual Property Organization (WIPO).

27. *See, e.g.*, 28 USC 1498.

Since 1981, the authorization and consent should be given explicitly and beforehand. See NASA Authorization Act 1982, Pub. L. 97-96, Dec. 21, 1981, sec. 7, adding a new subsection to the National Aeronautics and Space Act of 1958, Section 305:

"(1) The use or manufacture of any patented invention incorporated in a space vehicle launched by the United States Government for a person other than the United States shall not be considered to be a use or manufacture by or for the United States within the meaning of section 1498(a) of title 28, United States Code, unless the Administration gives an express authorization or consent for such use or manufacture."