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## Committee on the Peaceful Uses of Outer Space

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Item 5 of the provisional agenda\*

**Information on the activities of international  
intergovernmental and non-governmental organizations  
relating to space law**

## **Information on the activities of international intergovernmental and non-governmental organizations relating to space law**

**Note by the Secretariat**

### Contents

	<i>Page</i>
I. Introduction .....	2
II. Replies received from international intergovernmental and non-governmental organizations .	2
International Institute for the Unification of Private Law .....	2
International Organization of Space Communications .....	4
International Telecommunications Satellite Organization .....	8
Committee on Space Research .....	12

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## **I. Introduction**

The present document was prepared by the secretariat on the basis of information received by 17 January 2011 from the following international organizations: the International Institute for the Unification of Private Law (Unidroit), the International Organization of Space Communications (Intersputnik), the International Telecommunications Satellite Organization (ITSO), and the Committee on Space Research (COSPAR).

## **II. Replies received from international intergovernmental and non-governmental organizations**

### **International Institute for the Unification of Private Law**

[Original: English]

[15 December 2010]

#### **Update on activities in the space law field**

In 2010, humankind became increasingly active in outer space, an environment that is still uncharted territory in many respects, but particularly in legal terms. With an ever-growing number of players, notably commercial ones, in outer space, it is becoming all the more important for legal regimes to address the relevant issues. For this reason, the International Institute for the Unification of Private Law (Unidroit) has, over the past year, been deploying its best efforts to finalize the preliminary draft protocol to the Convention on International Interests in Mobile Equipment on matters specific to space assets and has begun preliminary studies into the issue of third-party liability for global navigation satellite systems.

#### **A. The space protocol**

The space protocol is the latest in a series of protocols to the Convention on International Interests in Mobile Equipment opened for signature in Cape Town on 16 November 2001. The Cape Town Convention is designed to facilitate asset-based financing by protecting secured creditors, conditional sellers and lessors of high-value mobile equipment that moves across or — in the case of satellites and other space assets — beyond international boundaries in the normal course of business by providing basic default remedies and an electronic international registry where international interests in such equipment may be registered. While the Cape Town Convention provides the overall framework for this regime, the protocols provide the equipment-specific rules adapting the framework for each category of asset covered by the Convention and, in the event of inconsistencies between a protocol and the Convention, the protocol will prevail. Thus, once adopted, the Space Protocol will provide the rules necessary for the Cape Town Convention to be applied to outer space assets.

The fourth session of the Unidroit Committee of governmental experts for the preparation of a draft Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Space Assets was held in Rome from

3 to 7 May 2010. The session was attended by 94 representatives of 37 Governments; including Governments of Unidroit member States and member States of the Committee on the Peaceful Uses of Outer Space; five intergovernmental organizations; five international non-governmental organizations; and representatives of the commercial space and financial communities. The cross-section of participants was crucial for the Committee's discussions, the goal of which was to develop an instrument that would be suitably responsive to market needs, while at the same time being in line with the United Nations treaties on outer space and instruments of the International Telecommunication Union (ITU). While significant progress was made at that session, it was agreed by the Unidroit Governing Council at its 89th session, held in Rome from 10 to 12 May 2010, that one more session of the Committee would be needed in order to find solutions to the outstanding issues. That session will be held in Rome from 21 to 25 February 2011.

In order to facilitate the reaching of consensus on these issues at the next session, the Committee at its fourth session decided that informal consultations should be held between representatives of the commercial space and financial communities and representatives of Governments serving on the Committee, with a view to addressing the concerns that had been expressed by certain representatives of those communities. The Committee also agreed that the session should also include meetings of its informal working groups on default remedies in relation to components and on limitations on remedies.

The consultations with representatives of the commercial space and financial communities, held in Rome on 18 October 2010, provided an open forum for the exchange of ideas on the best means of advancing the project and for Government representatives to be given further insight into the concerns of certain parts of the commercial space sector. The consultations were attended by representatives of the Governments serving on the informal working groups and representatives of Crédit Agricole SA, Eads, the European Satellite Operators' Association, the German Space Agency, the Satellite Industry Association of the United States of America, and Thales Alenia Space. The consultations led to a number of important steps forward in the understanding of what is needed to achieve a commercially viable end product. On the basis of the conclusions reached at these consultations, the informal working groups set to work over the following days on identifying appropriate solutions to outstanding issues.

In addition to the issue indicated in its title, the informal working group on default remedies in relation to components looked at the issue of the definition of space assets. Its meeting was attended by representatives of the Governments that had attended the consultations and three observers from the commercial space and financial communities, as well as two representatives of Aviareto, the Registrar of the International Registry for aircraft objects, who participated by telephone. Proposed new solutions on both issues emerged from the discussions; that on the definition of space assets was recommended as the basis of the Committee's future discussions on the subject and that on default remedies in relation to components was recommended as a tentative solution for consideration by the Committee.

The informal working group on limitations on remedies looked at the issue of public service at a meeting attended by the same Government representatives and observers that had participated in the other informal working group meeting.

Significant progress was made, as evidenced by the proposed new alternative solution that the informal working group came up with. The group felt that this proposed solution had a better chance of achieving consensus at the next session of the Committee than the existing alternatives and, accordingly, recommended it as the basis of the Committee's future discussions on the subject.

#### **B. Global navigation satellite systems**

Following a proposal submitted at its 85th session, held in Rome from 8 to 10 May 2006, the Unidroit Governing Council discussed the desirability and feasibility of a new project being added to the Unidroit Work Programme on third-party liability for global navigation satellite systems (GNSS). Given that a GNSS failure or malfunction could result in significant civil liability issues — such as jurisdiction, identification of the relevant parties, effective compensatory mechanisms and coordination with existing regimes — that might inhibit the growth and dissemination of this new system that many sectors have come to depend on, it has been suggested that Unidroit might consider developing an international instrument designed to resolve such issues.

At its 89th session, the Governing Council, having taken note of studies on the subject of possible future work by Unidroit on third-party liability for GNSS services prepared by two Council members, an outside expert and the secretariat, recommended its inclusion in the triennial Unidroit Work Programme. The Council, however, invited the secretariat to first hold informal consultations with the Governments and other organizations concerned, with a view to ascertaining the feasibility of the project.

These consultations were initiated by the secretariat with an informal meeting held in Rome on 22 October 2010. Although the representatives of Governments, organizations and the commercial space and financial communities who met to discuss the feasibility of Unidroit preparing such an international instrument expressed divergent views on the topic, notably by reason of the legal and political complexities involved, they conveyed their general interest in the project.

At its 67th session, held in Rome on 1 December 2010, the Unidroit General Assembly confirmed the conclusions reached by the Governing Council at its 89th session. The secretariat is, therefore, continuing its consultations.

### **International Organization of Space Communications**

[Original: English]

[8 December 2010]

#### **A. General information**

Founded on 15 November 1971 under the Agreement on the establishment of the "Intersputnik" international system and Organization of Space Communications, Intersputnik is an international intergovernmental organization headquartered in Moscow.

The mission of Intersputnik is to contribute to the consolidation and expansion of economic, scientific, technological and cultural relations using satellite telecommunications, video, and audio broadcasting and to support cooperation and coordination among member States in designing, procuring, operating and expanding an international satellite telecommunications system.

The Government of any State that shares the principles of the activities of Intersputnik can join the organization. Today, Intersputnik has 25 member States. The Governments of the Intersputnik member States appointed 21 signatories of Intersputnik from among national telecommunications organizations and/or telecommunications administrations.

## **B. Orbit and frequency resource**

Under the ITU Radio Regulations, frequency assignments of satellite networks can be filed on behalf of a group of administrations; one administration acts as a notifying administration and takes steps for the purpose of filing the assignments on behalf and in the interests of the whole group. This is also applicable to a group of administrations that are members of an international organization.

In accordance with these Radio Regulations, Intersputnik, through the notifying administration appointed by its member States, filed a number of frequencies to satellite networks in geostationary orbit to ITU between 1993 and 1998. Within the framework of its technological policy, Intersputnik secures international legal protection and analyses the utilization prospects of its orbit and frequency resources. With its own orbit and frequency resources, Intersputnik is able to participate in international and domestic satellite projects together with its members and signatories for manufacturing, launching and operating telecommunication satellites in its orbital slots.

## **C. Notifying administration**

In March 2009, Intersputnik reported to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, at its forty-ninth session, that the notifying administration that had been performing such functions for the administrations of the Intersputnik member States and in the interests of Intersputnik since 1993 had refused to continue performing its functions with respect to all but three satellite networks filed in the interests of Intersputnik.

The reason for this was that the notifying administration and Intersputnik had started disputing over the status of the three above-mentioned satellite networks. In the opinion of the notifying administration, the networks had a national status, while Intersputnik believed that they had been filed in the interests of all the administrations of Intersputnik member States and hence had an international status.

The opinion of Intersputnik that the three satellite networks had an international status was confirmed by the governing bodies of Intersputnik, which made a decision that Intersputnik had an exclusive right to these satellite networks. That decision was binding on all Intersputnik members and signatories.

Nevertheless, in 2009 and 2010, the notifying administration made several requests to the ITU Radiocommunication Bureau to recognize its exclusive rights to the three networks in question or to cancel and/or suspend their use. The Bureau

requested the administration to confirm that it had claimed that such recognition or cancellation/suspension should be done on behalf of the group of administrations of the member States of Intersputnik. The notifying administration failed to confirm that and the Bureau did not comply with the notifying administration's request. If the Bureau had formally complied with the request, it would have seriously affected the lawful interests of other administrations of the Intersputnik member States and would have caused considerable material damage to the administrations of the Intersputnik member States that used the satellite networks in question to establish branched terrestrial satellite telecommunications networks and numerous telecommunications and broadcasting channels.

Despite the fact that in an official letter dated 15 May 2009, the Radiocommunication Bureau confirmed that the satellite networks had been filed by the notifying administration on behalf of Intersputnik and in the interests of Intersputnik, in June 2010 the notifying administration in question requested the ITU Radio Regulatory Board to recognize an exclusive national right to one of the three satellite networks; suspend the use of the frequency assignments of two of the networks; and modify the ITU database by specifying that the entity responsible for the operation of the allegedly national satellite network was the notifying administration, and not Intersputnik. Having thoroughly studied the request, the Board unanimously rejected all of the notifying administration's claims.

The submission of the notifying administration was reviewed at the ITU Radio Regulatory Board meeting, where an official letter from the Chair of the Intersputnik Board was also presented to the effect that, at its session in April 2010, the Intersputnik Board resolved to terminate the performance by the telecommunications administration in question of the functions of the notifying administration acting on behalf of a group of administrations of Intersputnik member States and to assign such functions to the administration of the Russian Federation, which had been acting as the Intersputnik notifying administration with respect to the vast majority of the Intersputnik satellite networks for more than a year and a half.

While considering the above request by the Chair of the Intersputnik Board, the ITU Radiocommunication Bureau noted that, according to established practice, it was required to receive two official notices in order to modify the database by replacing the notifying administration, namely, one notice from the administration wishing to cease performing the functions of the notifying administration and the other from the new administration, confirming its willingness to perform such functions.

In the case of Intersputnik, no such notice was received from the telecommunications administration performing the functions of the notifying administration and the Bureau did not modify the database. When commenting on that, the Bureau and the Radio Regulatory Board supported the opinion that the Board should not take any steps on the instructions of an intergovernmental organization that should settle the issue of its notifying administration on its own and inform the Bureau of its decision through official channels.

**D. No mechanisms for legal control**

The ITU Radiocommunication Bureau has come across a specific situation concerning the relations between a group of administrations that are members of an intergovernmental organization and a notifying administration appointed by the group. It has also admitted that it does not have, at present, effective rules of procedure and that the Radio Regulations lack the tools to enable it to settle such situations on its own.

The procedure for appointing a notifying administration to act on behalf of a group of administrations is clearly defined in the Radio Regulations: the notifying administration chosen by the group only needs to specify in new filings that the networks concerned are filed on behalf of the group. All future requests concerning registration of the filing should be treated by the Bureau as if they are sent by the whole group, unless any information exists to the contrary.

At the same time, administrations that are members of the group of an intergovernmental organization are unable to implement their agreed decision to replace the notifying administration because the Bureau's practice only allows a notifying administration to be replaced if the administration being replaced voluntarily gives notice to the Bureau of the cessation of the performance of its functions.

However, both the choice and the replacement of a notifying administration acting on behalf of a group of administrations is the prerogative of that group.

As the case of Intersputnik showed, if an administration continues to perform the functions of a notifying administration on behalf of a group against the explicit will of that group's members, it can not only threaten the lawful interests of the group because the administrations that are members of the group have equal rights with respect to the satellite networks in question, but also affect the interests of third-party administrations.

**E. The rules of procedure of the Radiocommunication Bureau of the International Telecommunication Union need to be updated**

The fact that the Bureau lacks a mechanism to duly take into account the opinion of a large group of administrations means that it has no appropriate tools to deal with a situation affecting the lawful interests of a large group of administrations and ultimately impedes the efficient use of the orbit and frequency resource by the administrations on whose behalf the resource was filed.

In this connection, Intersputnik believes that the time is right to consider updating the Rules of Procedure and the Radio Regulations to define mechanisms that would enable a group of telecommunications administrations to exercise their right to appoint or replace the notifying administration acting on behalf and in the interests of the group.

When trying to improve these legal control mechanics and fill the legal vacuum, it is extremely important to consider the issue from various viewpoints in order not to infringe upon the lawful rights or interests of other groups of telecommunications administrations, including those that are members of international organizations.

## International Telecommunications Satellite Organization

[Original: English]

[10 November 2010]

### Annual report 2009

#### 1. Restructuring the organization

##### (a) Background

The International Telecommunications Satellite Organization (ITSO), formerly INTELSAT, is the continuation of the 148-member intergovernmental organization established by the Agreement relating to the International Telecommunications Satellite Organization “INTELSAT” in 1973. On 18 July 2001, the satellite fleet, customer contracts and other operational assets held by INTELSAT were transferred to Intelsat, Ltd. (sometimes referred to as Intelsat or “the company”), a new private company registered in Bermuda.

On 25 November 2009, Intelsat, Ltd. filed pro forma transfer of control applications with the United States Federal Communications Commission (FCC) for each of its five FCC licensee entities, reflecting the company’s intention to migrate the jurisdictions of organization of Intelsat, Ltd. and some of its parent holding companies and subsidiaries from Bermuda to Luxembourg. On 3 December 2009, FCC granted those applications.<sup>1</sup>

ITSO orbital locations are today under the jurisdiction of two notifying administrations: the United States of America, with respect to orbital locations utilizing frequency assignments in the C- and Ku-bands; and the United Kingdom of Great Britain and Northern Ireland, with respect to orbital locations utilizing frequency assignments in the Ka- and V-bands. In turn, these orbital locations and associated frequency assignments, referred to as the common heritage of the ITSO member States (parties), were licensed to Intelsat, Ltd. by the two notifying administrations. In addition, ITSO parties transferred landing licences to Intelsat, Ltd., usually without charge, to maintain continuity of telecommunications services to all parties.

As part of the 2001 privatization of the operating assets of INTELSAT, ITSO became the continuation of INTELSAT, in accordance with amendments to the 1973 Agreement.<sup>2</sup> The mission of ITSO is to ensure that, post-privatization, Intelsat provides international telecommunications services pursuant to the terms of a public services agreement formally entered into between ITSO and Intelsat, Ltd. The agreement establishes the following core principles that govern the provision of services by Intelsat:

(a) Maintaining global connectivity and global coverage for any country or territory that desires to connect with any other country or territory within and

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<sup>1</sup> This migration was largely completed on 15 December 2009. From this point forward, Intelsat, Ltd. is referred to as Intelsat SA. For activities or events prior to 15 December 2009, any references in this annual report to the company would continue to be to Intelsat, Ltd.

<sup>2</sup> Amendments to what from that point forward would be referred to as the ITSO Agreement entered into force on 30 November 2004, in accordance with article XVII, paragraph (e).

between the five regions of Africa, America, Asia, Eastern Europe and Western Europe;

(b) Providing public telecommunications services, including capacity and price protection guarantees, to customers identified as, and connecting with, lifeline connectivity obligation customers;

(c) Providing domestic public telecommunications services between areas separated by geographic areas not under the jurisdiction of the State concerned, between areas separated by high seas, or between areas that are not linked by any terrestrial facilities and are separated by natural barriers of such an exceptional nature that they impede the establishment of terrestrial facilities;

(d) Ensuring non-discriminatory access to the Intelsat, Ltd. communications system.

Adherence to these core principles was of such fundamental importance to the privatization of the satellite assets of ITSO that the transfer of operating assets to Intelsat was subject to Intelsat's ongoing adherence to the public services agreement. The agreement stipulates that the performance by Intelsat, Ltd. of these obligations, which incorporate the core principles, is the condition for the transfer of assets by ITSO to Intelsat, Ltd. and for its right to use the parties' common heritage orbital locations and associated frequency assignments.

**(b) Parties' common heritage**

The amended ITSO Agreement defines parties' common heritage as "those frequency assignments associated with orbital locations in the process of advanced publication, coordination or registered on behalf of the parties with the International Telecommunication Union (ITU) which are transferred to a party or parties pursuant to Article XII." In accordance with the ITSO Agreement, the Director General, on behalf of ITSO, considers all issues arising from the parties' common heritage assets and is responsible for communicating the views of the parties to the United States and the United Kingdom as the selected notifying administrations.

The 31st meeting of the Assembly of Parties, held in March 2007, approved an amendment of the ITSO Agreement (article XII, paragraph (c) (ii)) in order to protect the parties' common heritage orbital locations and associated frequency assignments. Under the terms of this amendment, the parties' interests in the common heritage would be protected in the event that the current licensed user of these frequency assignments, Intelsat, Ltd., waived such frequency assignments; used such frequency assignments in ways other than those set forth in the ITSO Agreement; or declared bankruptcy. Specifically, the amendment enables other satellite operator or operators, in case of the events cited above, to use these frequency assignments once they have signed a public services agreement with ITSO. During 2009, the process of ratification of this amendment by the parties continued, although to date the formal ratification process has not been completed.

The 32nd meeting of the ITSO Assembly of Parties, held in October 2008, took key decisions on the parties' common heritage assets. In view of the desirability of distinguishing the former INTELSAT filings from the other networks/assignments of the notifying administrations in the ITU Radiocommunication Bureau databases, and believing that such differentiation

would contribute in a significant way to safeguarding this common heritage, the meeting decided “to request the notifying administrations, in coordination with the Director General, to promptly undertake the necessary actions at ITU to amend the label of the parties’ common heritage orbital locations and associated frequency assignments in the ITU Registry to more clearly reflect their status as part of the parties’ common heritage.” During 2009, further actions were taken to implement this decision.

The 33rd meeting of the ITSO Assembly of Parties, held in July 2009, established a procedure for the notifying administrations to follow to supplement the implementation of their obligations under article XII (e) (iv) of the ITSO Agreement.

**(c) Ensuring the ability of Intelsat to fulfil its public service obligations in the long term**

On 10 July 2006, and as requested by its parties, ITSO petitioned FCC under section 316 of the United States Communications Act to modify the satellite licences of Intelsat LLC<sup>3</sup> for use of the orbital locations and associated frequency assignments that constitute the parties’ common heritage. The series of past leverage buy-outs by private equity funds had resulted in a dramatic increase in the debt of Intelsat, Ltd., which could limit its capacity to renew its ageing fleet, thereby jeopardizing its ability to fulfil, in the long term, its public service obligations in case of a market downturn or financial distress.<sup>4</sup>

The licence modifications requested by ITSO were intended to assure adherence by Intelsat, or any successor or subsequent satellite operator using the parties’ common heritage assets, to the core principles established by the ITSO Agreement. By filing this petition, ITSO requested that FCC, in accordance with the role of the United States as one of the primary notifying administrations and licensing jurisdictions for the parties’ common heritage assets, impose various conditions on the relevant licences, including:

(a) Ensuring that FCC licences granted to Intelsat LLC are linked to the core principles;

(b) Ensuring that any successor to Intelsat LLC or other satellite operator that uses the parties’ common heritage assets is bound by the core principles of the ITSO Agreement through the execution of a public services agreement with ITSO.

On 21 February 2008, FCC issued an order of modification to the licences of Intelsat LLC. This order implemented the two conditions referred to above, both of which had been endorsed by the United States Department of State, and clarified that, as part of routine processing, FCC would include such conditions in all future

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<sup>3</sup> Intelsat LLC is the licensee in the United States for satellites operated by Intelsat, Ltd., which uses the parties’ common heritage orbital allocations that were the subject of that petition.

<sup>4</sup> Since its acquisition by private equity funds in 2005, the successive recapitalizations of Intelsat, Ltd. have increased its debt to approximately 16 billion United States dollars, which currently exceeds its operating margin by a factor of 10. Under certain circumstances, this situation could imperil its ability to secure the necessary investments to renew its fleet and to fulfil the requirement of lifetime connectivity obligation customers for essential satellite capacity on a timely basis.

authorizations issued to Intelsat LLC in connection with any grant of authority to launch or operate a satellite in one of the parties' common heritage orbital locations.

**(d) Thirty-third Assembly of Parties**

The Assembly of Parties held its 33rd meeting in Rome in July 2009. The meeting, which was an extraordinary meeting, was chaired by Jose Saraiva Mendes, Special Representative of the Minister of Public Works, Transport and Communications of Portugal, and was attended by representatives of 97 parties.

The Assembly agreed on a set of procedures to be followed by the United Kingdom and the United States in their capacity as notifying administrations when discharging their obligations of notifying and consulting with the Director General on ITU satellite coordinations involving the parties' common heritage orbital locations and associated frequency assignments. The Assembly also decided to establish a frequency working party made up of one expert from each of the five ITU regions to assist the Director General on this matter.

**(e) Director General**

In July 2009, José Toscano, a citizen of Portugal, began his four-year term as Director General and Chief Executive Officer.

**2. Current network of Intelsat**

As of the end of 2009, the Intelsat SA global communications network included 51 satellites in orbit, leased capacity on one additional satellite owned by other operators, and ground facilities related to the operation and control of Intelsat's satellites. Intelsat's network also included ground network assets consisting of eight owned teleports, over 50 points of presence, and fibre connectivity in locations around the world that it uses to provide integrated and end-to-end services. The company's current fleet investment programme is the largest in its history.<sup>5</sup>

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<sup>5</sup> Intelsat is in the process of procuring 11 satellites that are expected to be launched over the next three years, including the New Dawn joint venture satellite. The company expected that 2009 total capital expenditure would range from approximately \$625 million to \$675 million, however, several delayed 2009 contract milestones could result in some of that expenditure being deferred into 2010. The 2009 capital expenditure estimate excluded capital expenditures related to the New Dawn satellite, for which the company's cash contributions in 2009 were minimal, and the purchase of the ProtoStar I satellite, for which all of the \$210 million consideration was paid in 2009. The company indicated that changes in the overall satellite launch market could result in increases to expected launch costs in the future.

Other satellites within the current fleet investment programme include:

(a) The Intelsat 20 satellite, to be located at 68.5° E, which will serve Asia and the Pacific. The Intelsat 20 satellite will replace the Intelsat 10 and Intelsat 7 satellites, which are currently co-located at that location.

(b) The Intelsat 17 satellite, to be located at 66° E, which will provide higher performing capacity across Asia, Europe, the Middle East and the Russian Federation, and will expand Intelsat's C-band video distribution community in the Indian Ocean region. The Intelsat 17 satellite will replace the Intelsat 702 satellite.

(c) The Intelsat 18 satellite, to be located at 180° E, which will provide continuity and enhanced performance in C- and Ku-band for network, voice and video services to the Pacific

**(a) Recent agreements and acquisitions of new satellites**

On 9 December 2008, Intelsat announced its New Dawn satellite project, a joint venture between Intelsat and a South African investor group led by Convergence Partners. The purpose of this project is to build and launch a new satellite into the 33° E orbital location to deliver wireless backhaul and broadband, among other services, to the Africa region. The New Dawn satellite is expected to be launched in the fourth quarter of 2010 and to enter into service in early 2011.

On 27 April 2009, Intelsat announced its plan to add the Intelsat 22 satellite to its fleet. This satellite is expected to be launched in the first quarter of 2012, and will serve at the 72° E longitude orbital location over the Indian Ocean region.

On 30 October 2009, Intelsat announced that it had been selected as the successful bidder in public auction for the ProtoStar 1 satellite. Upon conclusion of the transaction, the satellite will be renamed Intelsat 25 and will join its global fleet, serving with the company's other assets in the Atlantic Ocean region and providing incremental satellite capacity to central Africa and other regions.

**(b) Launch of new satellites**

On 23 November 2009, Intelsat launched the Intelsat 14 satellite. This satellite will provide high-powered data services through its C- and Ku-band payload to the company's customers throughout Latin America, Europe and Africa. Once Intelsat 14 is operational, it will replace Intelsat's 1R satellite at 315° E, providing customers with capacity that has a useful life expected to last for the next 16 years.

On 30 November 2009, Intelsat launched the Intelsat 15 satellite. This satellite will operate from 85° E, replacing the Intelsat 709 satellite. Intelsat 15 will provide video and data services through its Ku-band payload, and will cover the majority of the Middle East, the Indian Ocean region and Russia.

**Committee on Space Research**

[Original: English]

[10 December 2010]

**Committee on Space Research Panel on Planetary Protection: actions relating to space law as of 20 July 2010, Bremen, Germany**

The Panel on Planetary Protection held its biannual business meeting in Bremen in conjunction with the 38th Committee on Space Research (COSPAR) Scientific Assembly.

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Islands and offer connectivity to the western United States. The Intelsat 18 satellite will replace the Intelsat 701 satellite.

(d) The Intelsat 19 satellite, to be located at 166° E, which will feature increased Ku-band capacity optimized for direct-to-home and network services applications in Australia. The satellite's C-band capacity will provide enhanced performance capacity for distribution of international video content throughout Asia and the Pacific, with reach to the western United States. The Ku-band payload will also support demand for mobility and enterprise network applications across the region. The Intelsat 19 satellite will replace the Intelsat 8 satellite.

**A. Clarification of provisions of the Planetary Protection Policy of the Committee on Space Research**

At that meeting, a resolution on technical changes to the COSPAR Planetary Protection Policy of July 2008 was developed, to include provisions to clarify the precise definition of planetary protection categories II, III, and IV, as developed at the Vienna Workshop on Planetary Protection for Outer Planet Satellites and Small Solar System Bodies and the Pasadena Workshop on Planetary Protection for Titan and Ganymede, both held in 2009. Also included were guidelines on the preparation of an organic inventory for missions to bodies where such an inventory is required; a clarification of the trajectory biasing requirement for Mars, to include a time frame for the requirement; and a simplification/correction of the category IV (b) requirement for Mars and the requirement for containment of unsterilized samples returned from Mars to Earth. In addition, an amplification of the reporting requirement recommended that COSPAR members inform COSPAR when establishing planetary protection requirements for planetary missions. This resolution will be considered by the COSPAR Bureau in March 2011.

**B. Resolutions for future consideration**

A number of resolutions related to the COSPAR Workshop on Ethical Considerations for Planetary Protection in Space Exploration (held in Princeton, United States, in 2010) were reviewed, but not taken for action during the business meeting. Further discussion and development of those resolutions is planned. They include the following concepts:

(a) The establishment of a framework for environmental stewardship in space;

(b) COSPAR (through both the Panel on Planetary Protection and the Panel on Exploration) should elaborate management guidelines and draft guidelines/requirements/regulations in cooperation with other organizations such as the International Institute of Space Law, the Committee on the Peaceful Uses of Outer Space and others;

(c) Such a framework should be in addition to the accepted regulations for preventing harmful planetary contamination of a biological or organic chemical nature;

(d) Such a framework could eventually include the establishment of an intergovernmental mechanism/convention to regulate space exploration and use and the path to be followed could be similar to the development and adoption of the Space Debris Mitigation Guidelines by the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space. The guidelines adopted by the Subcommittee were subsequently endorsed by the Committee and the General Assembly.

**C. Proposals for Committee on Space Research meetings prior to the 39th Committee on Space Research Scientific Assembly**

Two meetings for further development of the COSPAR Planetary Protection Policy were proposed and accepted by the COSPAR Bureau:

(a) A workshop on Development of Foundational Ethical Principles Applicable to Planetary Protection and Space Exploration, chaired by Margaret S. Race, to take place in 2011;

(b) A colloquium on establishing risk levels for a Mars sample return mission, chaired by John D. Rummel, to take place in 2012.

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