
**Committee on the Peaceful
Uses of Outer Space
Legal Subcommittee**

Script

873rd Meeting

Wednesday, 17 April 2013, 10 a.m.

Vienna

Chairman: Mr. T. Brisibe (Nigeria)

The meeting was called to order at 10.12 a.m.

The CHAIRMAN: Good morning distinguished delegates. I now declare open the 873rd meeting of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space.

This morning we will continue and conclude our consideration of agenda item 5, Information on the Activities of International Intergovernmental and Non-Governmental Organizations Relating to Space Law.

We will continue our consideration of agenda items 10, Capacity-Building in Space Law, and 12, Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space.

There will be a special joint technical presentation lasting for about one hour entitled "The Legal Framework for the International Space Station" by representatives of the following space agencies: CSA, ESA, JAXA, NASA and Roscosmos.

I would also like to remind delegations to provide the Secretariat with any written amendments to the provisional list of participants, distributed as Conference Room Paper 2, by today at close of business so that the Secretariat can distribute the final list tomorrow.

Information on the activities of international intergovernmental and non-governmental organizations relating to space law (agenda item5)

Distinguished delegates, I would now like to continue and conclude our consideration of item 5 on our agenda, Information on the Activities of International Intergovernmental and Non-Governmental Organizations Relating to Space Law.

The first speaker on my list is the distinguished observer of Intersputnik.

Ms. E. MOROZOVA (International Organization of Space Communications, Intersputnik): Distinguished Mr. Chairman, thank you for this opportunity to take the floor here.

Distinguished delegates, good morning, I would like to speak on the activities of the Intersputnik, International Organization of Space Communications.

Founded in 1971, Intersputnik is an international intergovernmental organization headquartered in Moscow. Today, Intersputnik has 26 member countries. Intersputnik's mission is to contribute to the consolidation of economic, scientific, technological and cultural relations between the member States and third countries aimed at procuring, operating and expanding an international satellite telecommunications system. Within the framework of its technological policy and in accordance with its mission, Intersputnik filed with the International Telecommunication Union the radio-frequency spectrum in various geostationary satellite orbital positions.

Today, the radio-frequency spectrum is at the disposal of Intersputnik in 25 positions in the geostationary orbit from 113 degrees West to 164 degrees East. With its own orbit and frequency resource, Intersputnik is able to implement satellite projects for the purpose of manufacturing, launching and operating satellites offering the whole range of high-end telecommunication services.

Unable to fully finance the manufacture and launch of a new satellite on its own, Intersputnik requested the assistance of the member States, offering most attractive orbital slots for satellite projects aimed at procuring Intersputnik's own space segment. Regretfully, for some objective reasons, it was impossible to draw investors with sufficient funds within the framework of our Organization. Therefore, it was decided to continue using the available frequency and orbit resource in cooperation with

outside partners. Essentially, such partnership boils down to the following.

The outside partner pays for the manufacture, launch and deployment of a new satellite in an agreed GSO position. Intersputnik grants to the outside partner the right to operate this satellite using Intersputnik's filed frequency and orbit resource. For Intersputnik to participate in any joint satellite project, it is of utmost importance to be able to procure its own satellite resource on new satellites that is a certain number of transponders which are subsequently used mainly in the interests of our members. Moreover, to meet the interests of its members to the maximum extent possible, Intersputnik takes an active part in defining the configuration and technical parameters of its future transponders.

Today, joint satellite projects using Intersputnik's frequency and orbit resource are being carried out in five orbital positions. Satellites have already been deployed in three of these slots, while in the other two positions satellites will be placed in the near future.

On the one hand, joint satellite projects help acquire sufficient financing to apply the latest technical advances and consequently limit the radio-frequency spectrum used to the minimum essential, and on the other hand, let Intersputnik grant to its member States access to satellite capacity on preferential and most favourable conditions and provide in a qualified manner all the necessary advanced telecommunications services, thus meeting our Organization's objectives specified in its statutory documents.

While the practical advantages of joint satellite projects using Intersputnik's frequency and orbit resource are evident, it would be appropriate to briefly describe the legal aspect of this issue.

As it is known, the radio-frequency spectrum is a unique limited natural resource which is about to be exhausted. In this connection, it is important to make sure that it is used as set forth in Article I of the Outer Space Treaty based on equality of all States without exception.

At the same time, the GSO radio-frequency spectrum is an integral part of outer space which is mankind's common asset, not to be possessed by or transferred to a country. When filing radio-frequency with the International Telecommunication Union, in strict compliance with the procedures established by the Radio Regulations, a given Administration is temporarily entitled to use certain frequencies and

technical parameters in the GSO. Such temporary assignment of the right of use of the radio-frequency spectrum does not empower its holder to make any transactions related to the alienation of the radio-frequency spectrum, sell, donate or exchange it.

However, one must that there exists a secondary market for the radio-frequency spectrum rights where one can lease frequency assignments.

On the one hand, this phenomenon is in no manner regulated by the International Telecommunication Union Radio Regulations while its existence in practice has led and still leads to numerous questions. On the other hand, the lease of frequency assignments does not call in question that the radio-frequency spectrum cannot be alienated and does not lead to classic trade in frequency assignments. For third parties, a State or an international organization in whose interests a satellite network was filed, remains to be the possessor of the radio-frequency spectrum concerned including all related rights, obligations and liability.

At the same, a lease of frequency assignments helps overcome a high degree of GSO monopolization with more users having access to the radio-frequency spectrum. As it is known, as the GSO became increasingly occupied and demand grew for satellite communications services, satellite operators starting taking various steps to prevent competitors from gaining access to the spectrum and orbit.

It is beyond any doubt that the International Telecommunication Union and specifically its Radiocommunication Sector play a vital role in the global management of the radio-frequency spectrum, successfully implementing both technical and economic methods. At the same time, it is evident that only a comprehensive approach to regulating all aspects of the use of the radio-frequency spectrum can make such use rational, equitable, efficient and economical.

The scarcity of the frequency and orbit resource and the existing high demand for such resource will inevitably result in many more mutually beneficial transactions related to the assignment of the radio-frequency spectrum usage rights. Establishing the corresponding regulatory basis for such assignment could significantly increase the opportunities for GSO usage and facilitate the development of future satellite systems.

In conclusion, I would like to refer to Section 0.3 of the preamble of the International

Telecommunication Union Radio Regulations calling upon the ITU members to bear in mind that radio frequencies and the GSO are limited natural resources and that they must be used in a manner to allow countries or groups of countries to have equitable access to both, taking into account the special needs of the developing countries and the geographical situation of particular countries. It is important in this context that in the first place Intersputnik implements joint satellite projects in the interests of its members, most of which are developing countries.

Thank you for your attention.

The CHAIRMAN: I thank the distinguished representative of Intersputnik for her statement.

The next speaker on my list is the distinguished representative of the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation.

Ms. M. WILLIAMS (Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation): Thank you Mr. Chairman. A year ago, from the bench of the ILA, we had the honour to introduce our sister institution in the regional theme, the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, to this Legal Subcommittee.

In June, in the COPUOS, the President of the Institute, Dr. Javier Aparicio Gallego, took part in the session to continue talking about the activities of the Institute.

We are today very proud to see that the Institute has become a permanent observer to COPUOS and we are ready to support this Institute and give all our cooperation in the work of the Legal Subcommittee and the Scientific and Technical Subcommittee of COPUOS as well.

Last year, in Conference Room Paper No. 17, the activities of the Institute, its annual publications were described in detailed so I shall not refer to that at the moment. I just wanted to say that the Institute is ready to celebrate its fiftieth anniversary next year and it has very recently, in October last year, celebrated its fortieth meeting on aerospace law in Spain, in Cadiz, where we were working on the question of space debris and its legal implications.

So far, the Institute has published 33 volumes on different aspects of air and space law. In 2011, it celebrated its thirty-ninth annual meeting in Latin

America, in Asunción, Paraguay, and it brings together, apart from Spain and from Portugal, all Spanish-speaking countries in the world.

Among its latest publications, I shall mention the book which is reflecting the fortieth meeting on air and space law which I just mentioned which had took place in Cadiz, and the book referring to the International Space Station which is reflecting the doctoral thesis submitted by one of the members of the Executive Council of the Institute, Dr. Elisa González Ferreiro. And also very recently, there is a general course on space law of which the authors are Elisa González and the distinguished representative of Spain, on my right, Dr. Rafael Moro Aguilar.

Before, with your leave, Mr. Chairman, passing the floor on to Dr. Rafael Moro, who is going to mention what were the conclusions arrived in Cadiz last October, I would like to say that the Ibero-American Institute has supported the work of the ILA insofar as space debris is concerned and adopted the conclusions arrived by the ILA, except on one point on which the Spanish specialists and the Latin American specialists had rather mixed feelings and that concerns debris arising from collision in outer space following the example of Cosmos and Iridium in 2009 and other examples like in 2011 when space debris went very close to the International Space Station in the low orbit and the six astronauts on board had to seek refuge in the emergency vehicles.

So unlike the ILA, the conclusions of the Ibero-American Institute do not refer to fault liability because they consider that there is a very big problem in the case of concurrent liability to determine the degree of fault of each of the parties involved in the damage. So they are very much for liability in tote(?).

Having said this, I shall then give the floor to my colleague, Dr. Rafael Moro Aguilar, the Spanish representative.

Mr. R. MORO AGUILAR (Spain) (*interpretation from Spanish*): Thank you Maureen. I would like to say that I am not speaking as a national delegate of a country but as a representative of the Ibero-American Institute of Aeronautic Space Law and Commercial Aviation.

So with your permission, Chairman, I would like to read the conclusions of the panel on space debris which took place in Cadiz last October. I would like to share them with them with the Legal Subcommittee.

General opinion today is that space debris, together with other problems such as near-Earth objects, are a serious threat to space safety and are a challenge for the legal world, and given the absence of information, debris from military satellites are even more worrying.

Thus, the inclusion of space debris as a separate item on the agenda of this Legal Subcommittee is indeed a step forward although it should go beyond information on national measures adopted by States for the mitigation of space debris.

In accordance with the proposal made by the Czech Republic to the Legal Subcommittee, it would seem appropriate for space debris and the Guidelines on Space Debris to become a United Nations Principle within the framework of a General Assembly resolution. When these resolutions declare Principles or Guidelines, they are not mandatory except when they incorporate norms of international custom. When the stage of adopting treaties and principles by the United Nations seems to have been concluded and this political moment does not seem the best for adopting stricter standards, nothing prevents us from re-opening this procedure in the case of risks and threats of uncertain consequences and the alarming figures regarding space debris in today's world.

Regarding solving disputes caused by the risk of space debris, it would be recommendable to analyze the new standards of the United Nations Permanent Court of Arbitration, adopted in 2011. These are of a procedural nature and to be expressly applied to the field of space.

Finally, bearing in mind that the Institute is now a permanent observer before COPUOS, we hope to increase cooperation on this subject and others on the agenda of the Legal Subcommittee by giving presentations and conclusions of our future seminars and meetings at the meetings of the Legal Subcommittee.

Thank you very much Chairman.

The CHAIRMAN: I thank the distinguished representatives of the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation for their statements.

Are there any other speakers on this item, 5, at this time?

I give the floor to the distinguished representative of Mexico.

Ms. R. M. RAMÍREZ DE ARELLANO (Mexico) (*interpretation from Spanish*): Thank you Mr. Chairman and good morning. I have a question for the distinguished delegate of Intersputnik. Maybe I misunderstood something and then please correct me.

The frequencies are the common heritage of mankind it was said but I would be interested to hear in what document that is actually established with regard to satellite frequencies. The International Telecommunication Union has the Convention and Regulations proclaiming that all should have equal access to the benefits provided by the geostationary orbit including satellite frequencies. And also there are addenda to the International Telecommunication Union documents where every applicant should be guaranteed at least one orbital position but I would like to hear more about what was said. Maybe it was something that I misunderstood.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Mexico for her statement and perhaps should give the floor to the distinguished representative of Intersputnik, should you wish to clarify the question which has been raised our distinguished colleague and representative of Mexico. You have the floor.

Ms. E. MOROZOVA (International Organization of Space Communications, Intersputnik): Thank you distinguished representative of Mexico for your question. I suppose you have understood everything absolutely correct. First of all, I have told that the GSO is as a part of outer space and is regulated by the outer space treaties also which provide for equity of all States without exception to the outer space, including the GSO. And you were absolutely right when talking about the International Telecommunication Union documents which provide for equal access of every State to the GSO including the orbit and the frequency spectrum and it is absolutely true that there are planned frequencies which are assigned to all the member States of the International Telecommunication Union so to secure this provision of equitable access. But, of course, in practice, we have a situation when different States have a different number of a different volume of this spectrum. States which are the most developed and holds active space activities, they have a lot of frequency spectrum filed with the International Telecommunication Union and those countries which are being developing in this sphere, they have only planned frequencies which cannot be used so

effectively at the frequencies which were filed and used on a commercial basis.

The CHAIRMAN: I thank the distinguished representative of Intersputnik for that clarification and see that the distinguished representative of Mexico wishes to take the floor.

Ms. R. M. RAMÍREZ DE ARELLANO (Mexico) (*interpretation from Spanish*): Yes, thank you for the clarification with regard to the heritage of humankind. It is not that but it is a scarce resource, a limited resource and the International Telecommunication Union Rules and Regulations, particularly Article 99(a) makes it very clear that all members should have access to the geostationary orbit. And indeed, as the distinguished delegate of Intersputnik pointed out, planned orbital positions are envisaged on that basis, taking into account the requirements of the countries. What happens on the international level is that frequencies are assigned with regard to the internal codes and requirements of each country.

Thank you very much.

The CHAIRMAN: I thank the distinguished representative of Mexico for her intervention and before I perhaps say a few words about the issue that is being discussed, are there any other delegations wishing to make a statement or intervene on this item or on the subject that is now being discussed under this item?

I see none and perhaps what I can then do is summarize and also clarify procedurally. We do have an item on our agenda, 6(b), on the Character and Utilization of the Geostationary Orbit, Including Consideration of Ways and Means to Ensure the Rational and Equitable Use of the Geostationary Orbit, Without Prejudice to the Role of the International Telecommunication Union, on the one hand. At this time, we are, in fact, taking statements from delegations and observers under item 5, Information on the Activities of International Intergovernmental and Non-Governmental Organizations Relating to Space Law.

Having said that, I recall in the course of this session of the Subcommittee there have been several statements made by States with respect to how these radio frequencies are assessed and the overall question of the geostationary orbit which, as it were, I can only imagine the International Telecommunication Union would be best placed to explain to us as far as what the current procedures are regarding access to these

resources, the radio-frequency spectrum and the geostationary orbit. It is unfortunate that the representative of the International Telecommunication Union is not here with us at this time. I understand, and I did meet with him, he was here during the course of last week. Perhaps what we could do is invite the representative of the International Telecommunication Union to a future session of the Legal Subcommittee, perhaps to give us a presentation, for example, on what steps and developments have transpired under the Constitution, the Convention of the International Telecommunication Union, the relevant Radio Regulations and how this question of access to the frequencies and the geostationary orbit is being considered by that Organization.

In the absence of any further statements or interventions that delegations wish to make under this agenda item, actually 5, Information on the Activities of International Intergovernmental and Non-Governmental Organizations Relating to Space Law, we have, therefore, concluded our consideration of this agenda item 5.

Capacity-building in space law (agenda item 10)

Distinguished delegates, I would now like to continue, certainly continue our consideration of agenda item 10, Capacity-Building in Space Law.

The first speaker on my list is the distinguished representative of Chile on behalf of GRULAC.

Ms. T. ALVAREZ (Chile) (*interpretation from Spanish*): Thank you very much Mr. Chairman. GRULAC firmly believes that regional and interregional cooperation is one of the fundamental pillars in terms of making use of outer space for the benefit of nations that would enable countries to interchange knowledge and good practices and engage in capacity-building at the national and regional levels. This is of special relevance with regard to promoting space law in developing countries. Therefore, we reiterate the importance for the Secretariat to continue exploring better ways for cooperation among national institutions and public education entities as well as the private sector to promote capacity-building in outer space law. GRULAC believes that adequate education in space law with a view to strengthening internal legal regimes and the international legal framework is fundamental if we are to guarantee the peaceful uses of outer space. Therefore, we call on all countries and institutions to cooperate in that regard.

GRULAC believes it is indispensable that the Working Group on the Definition and Delimitation of Outer Space should continue its deliberations, analyzing, *inter alia*, ways to arrive at a unique legal regime to govern navigation of aerospace objects and fill the lacuna that still exists both in air space law and outer space law.

As a result, GRULAC notes with discouragement that the issue has not really been tackled in an effective way. Little progress has been made which creates legal uncertainty in terms of the countries rights and obligations. We believe that analysis should continue in terms of the definition and delimitation of outer space and we call on member States to send their responses to questionnaires regarding possible legal issues related to aerospace objects. The compilation of these replies and the analytical summary issued by the Secretariat of the Office will be of great use to all of us in terms of arriving at a complete and relevant analysis of issues important to countries. GRULAC hopes that the deliberations of that Working Group will bring it to conclusions that would benefit all.

We would also like to emphasize the importance of these issues. They were discussed, in particular, in October 2012 in Buenos Aires, Argentina, in the Eighth Workshop of the United Nations on Space Law. It was organized by the Office for Outer Space Affairs and the Government of Argentina, acting through its National Commission on Space Activities, CONAE, as well as the European Space Agency. The idea was to promote a general vision of an international legal regime governing the use and exploration of outer space. We cannot but note with pride that of the eight such Workshops, this was the second to have been held in Latin America and we hope that it will not be the last.

Thank you very much Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Chile on behalf of GRULAC for her statement.

The next speaker on my list is the distinguished representative of Pakistan.

Ms. M. RIAZ (Pakistan): Honourable Chairman and respected delegates, let me begin by facilitating you, Mr. Chair, for the commendable manner in which you have been leading this Subcommittee. We remain fully confident in your abilities to successfully steer the work of this important

mechanism with your utmost commitment and dedication.

May I also express on behalf of my delegation our deepest appreciation for the untiring work done by Dr. Mazlan Othman as Director of the United Nations for Outer Space Affairs.

Pakistan firmly believes in the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes. We support the call for rational and equitable access for all States to the geostationary orbit. Being a party to all of the five core United Nations treaties on outer space and as a member of the United Nations Committee on Outer Space Affairs, Pakistan will continue to contribute actively to the work of this Subcommittee which corresponds to the evolution of space activities and the ways and means of further enhancing international cooperation in the peaceful uses of outer space.

Mr. Chairman, the United Nations COPUOS has an important role in ensuring that the benefits of space science technology also reach the developing countries. The developed countries, however, must have the political will and the right priority to engage the developing countries in this field. This engagement should entail sharing of experiences, technology transfer and non-discriminatory and affordable and timely access of relevant data.

With the need to fully assess the United Nations treaties on outer space and for an evaluation of Pakistani law, the need also arises for SUPARCO to develop its own capacity in space law. For this purpose, several new developments have taken place.

Within the International Affairs Division at SUPARCO, a section for space law has been established. Under this section, a team of lawyers are being inducted and trained in international space law. The objectives of the team will not only be to learn about international space law but to analyze its possible implications on Pakistan's national laws as well as drafting new laws when needed. Long-term projects include drafting new space legislation in accordance with the laws and interests of Pakistan.

SUPARCO is also utilizing the services of prominent lawyers in Pakistan by asking them for legal assistance in several issues. Such lawyers are experts in international law and its various inter-related fields including space and aviation law. Furthermore, in September 2012, the first National Space Conference was held in Pakistan. In the National Space

Conference, two sessions were wholly devoted to space law.

Pakistan accords a high priority to the Legal Subcommittee and the work assigned to it in improving the legal dimension of the international space activities for peaceful purposes. This forum provides a useful platform to the member States for exchanging views and best practices on their national legislation on this account.

As a member of the Legal Subcommittee, Pakistan will continue to contribute actively to the mandated work of this useful mechanism and will be ready to share our national experiences in this regard.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Pakistan for her statement.

The next speaker on my list is the distinguished representative of Argentina.

Ms M. WILLIAMS (Argentina) (*interpretation from Spanish*): Thank you Mr. Chairman. I am thankful for the honour of letting Argentina hold the United Nations Workshop in Buenos Aires last November. Many of us in this room, many of the distinguished delegates, including our Chairman of the Legal Subcommittee and the Secretary, have attended these Workshops.

Right now, we would like to highlight some of the most important aspects of our experience in that regard.

The audience consisted mostly of Latin American experts from a number of countries as well as international experts from industrialized countries. I am not going to refer to each item on the agenda and each session.

A CD or a DVD of the Workshop will be disseminated among delegates and it will contain detailed information.

I just wanted to share some of the personal impressions from participating in that Workshop organized by the Office for Outer Space Affairs on a regional basis.

This type of Workshop is a little similar to that organized in Rio de Janeiro in 2004, also with the participation of ESA, the European Space Agency and a lot of effort invested by CONAE, the National Space

Commission of Argentina, and our colleagues of the United Nations Office for Outer Space Affairs.

For the Buenos Aires Workshop, the chosen title was "The Contribution of Space Law to Economic Development and Social Development" in developing countries and in general around the world. The idea was to promote awareness of the five United Nations treaties and help States build capacities with regard to outer space law.

One hundred and thirteen delegates from a number of countries attended. CONAE, ESA and the Office for Outer Space Affairs addressed participants in the Workshop. We focused from the very beginning on the contribution of space law to socio-economic development in Latin America, and in the second part of the legal framework being created for international space activities involving various actors in space activities with a special emphasis on joint activities by Argentina and Brazil as part of their space programmes.

Other items on the agenda included resolution of conflicts within the framework of space law, the norms and standards for arbitration to be carried, *inter alia*, by the United Nations Standing Court on Arbitration, recently adopted measures in that regard as they apply to space activities in terms of resolving conflicts and differences, again with an emphasis on the access of developing countries to space technologies and the growing commercialization of space activities.

There is no doubt that in recent years, Latin American countries have been setting up special entities, special units that allow them to put to the most beneficial use these new technologies and respond to the new landscape in outer space activities.

With regard to the legal framework, Argentina adopted a national law with regard to measures pertaining to asteroid or meteorite fragments that enter its territory involving the need to inform national authorities and UNESCO with regard to threats to what is considered to be part of the heritage of humankind.

The third session focused on the national legal frameworks for space activities, the idea, and I know the experience of Argentina in that regard, is to develop a national law. We know Brazil as well has made a concerted effort in that regard and we have a distinguished representative of Brazil here to confirm it.

And the fourth session focused on the legal aspects of the use of space technologies and geo-spatial data or data obtained through space technologies.

There was a discussion that focused on whether or not use and utilization are synonyms or whether there is a distinction between the first come use and utilization in the sense that utilization is close to exploitation even though the word "exploitation", God forbid, should not be used in that context.

We concluded that use comes before utilization but some opinions were expressed to the effect that that is not always the case but that was a theory advanced by most experts. This I am telling by way of anecdote, if you will.

Other items of the agenda involved international cooperation and agricultural applications of space-based technologies in Argentina. A holder of a Doctorate degree in that particular subject addressed the Workshop and there is a Degree Course now offered in Argentina specifically on agricultural applications. And also reference was made to a case adjudicated by the Supreme Court of Argentina of 2002 and for the first time and Argentina's space technologies were used to analyze flood-prone areas and this was something that had been monitored by the Government of the Province and over 14 years agricultural fields had been flooded and the case was about ways that had existed to prevent that.

We also considered an item that came up here yesterday, the use of satellite information as evidence in international conflicts, the validity of such data, the use of such data for those purposes. Three years ago, a Workshop was held in Buenos Aires under the auspices of ESA and the Argentine Space Agency specifically to focus on the validity and value of satellite data in addressing issues arising from national and international conflicts. Obviously such satellite information needs to be certified by the competent authorities but can it be used in trans-border conflicts. Judges had been considering the matter and some have resisted accepting information or evidence based on space technology.

(Continued in English) ... and we dealt with the contribution of space law and here I would like to highlight the work presented by a PhD student from France who is studying in Argentina and she was looking at post-graduate degrees and came to us. She was analyzing space debris in geostationary orbit and her contribution really was worthwhile. She attended the meeting of this Subcommittee last year and she

continued with her research. I am sure that this will be published.

Sergio Camacho, our colleague, talked about the institutional aspects of near-Earth objects and the danger they could entail although the current risk is quite limited but we should be prepared for worse possibilities and those who have available technology will need to provide support to destroy these threats or at least change their path.

Another problem that was mentioned in that presentation was the thorny issue of the political decision to say, yes, go ahead and destroy this object. These are natural objects. They are not man-made so they can affect humanity and where, of course, we have versions of it in every language in the space treaties.

And we also talked about regional cooperation and the value of bilateral and multilateral agreements and that brings me to the subject of cooperation between developing countries. We talked about the Aquarius Mission which is a true example of international cooperation. At low orbit, the vehicle made by Argentina, the high-tech instruments were provided by Italy and Canada. Brazil provides its facilities for the pre-launch tests and the launch is made by NASA from Vandenberg in California, and the mission is to detect the salinity of oceans, especially the Indian Ocean, and measuring particles, water vapour and others using this technology.

The sixth session, regional and interregional cooperation, and the seventh session dealt with capacity-building and training in space law. The two key words in that regional seminar were "training" and "international cooperation".

There was a presentation from the Ibero-American Institute, who spoke here just before I did, because Spanish-speaking countries in Latin America are an important link in cooperating with European countries. All this information is on the CD and on the website.

So I will just use two more minutes to refer to some events in Argentina which I am most familiar with.

The University of Buenos Aires and the Rosario University, which is a national university, 100 kilometres from Buenos Aires and Belgrano Private University in Buenos Aires now cover scientific research which is completely interdisciplinary in nature and there are students working on space law now. One

student is studying the use of space technology to study changes in stratospheric ozone when the polar clouds which have gathered the chemical components from factories and they are released into the atmosphere. These are enemies of the ozone layer according to the United Nations Convention on the Ozone Layer and, of course, there are international measures that have been adopted to mitigate this.

What really surprised those of us involved in the project is that climate change, we can now measure the damage caused with figures in Dobson Units so we can measure the damage caused which will be helpful in terms of finding solutions. Then the National Council for Scientific Research is focusing and working with different institutes who are also present here and it is dealing with environmental policies in industrialized countries and in developing countries and the impact of space activities on the environment and, of course, there is also some work on solving disputes.

I think I have probably exceeded my time. I would like to thank you for your patience and your time. Thank you Chairman.

The CHAIRMAN: I thank the distinguished representative of Argentina for her statement and the very detailed report of this Workshop which was held late last year and co-hosted the Office for Outer Space Affairs and the European Space Agency.

I should now give the floor to the Secretariat to make a few announcements.

Mr. N. HEDMAN (Secretary, Office for Outer Space Affairs): Thank you Mr. Chairman. Not exactly announcements. It is just as the Secretariat was the co-organizer of the Workshop, just a couple of small additional comments in addition to what was already expressed by the distinguished delegate of Argentina.

Delegations have the official report of the Workshop in all languages in document 1037 and you are also provided with the CD-ROM, it looks like, with the full proceedings.

In that regard, what was very satisfactory to the Secretariat in putting together the Workshop was one of the panel discussions that was mentioned by the delegate of Argentina, in particular on a review of the state-of-affairs of development of national space legislation in the region. The Workshop was not only for the Latin American/Caribbean but was in the broader concept of the Americas. So we limited the

participation in the Workshop, of course, to all countries in Latin America and the Caribbean but also from North America.

This particular panel, I am referring now to the official report of the Workshop, in paragraph 15 you will see a note on this and to our satisfaction we had a panel comprising 13 countries in that wider region, Argentina, Brazil, Canada, Chile, Colombia, Cuba, Ecuador, Honduras, Mexico, Paraguay, Peru, United States and Venezuela, and in the proceedings, you will find the presentations delivered by those panellists. We used as a method to encourage the debate, we used the final report of the Working Group on National Space Legislation, as you are all aware, in document A/AC.105/C.2/101, and it was a very fruitful exchange of information and updates on the development of national space legislation of those countries. So the Secretariat is very grateful to the participation of those States in that discussion.

Before concluding this additional remark, Mr. Chairman, just to add to what the distinguished delegate of Argentina already expressed, in the set of recommendations, observations and conclusions of the Workshop and its contained in the report of the Workshop, I wanted to point out paragraphs 27, 34, 35 and 36 that delegations could just if you wish to read and gather some more information. You see, the Workshop for the first time broadened the way that the Office for Outer Space Affairs is organizing those space law workshops, as you recall, it is the eighth in this series, by linking space law and contributions of space law, namely, to economic and social development for which we, in the Workshop studied perspectives that are not traditionally being done in those Workshops.

We looked into the contribution of the Committee on the Peaceful Uses of Outer Space to the Rio+20 Conference, you recall document A/AC.105/993, in particular on the set of recommendations because there is a clear recommendation from the Committee in that documentation on the establishing of national special data infrastructures which is, of course, an administrative matter but it deals with regulatory aspects as such. So that was highly relevant to the conducting of the Workshop.

I have already mentioned the highly successful review of the national space legislation development in the region. I would, before concluding, just mention that the Workshop also endeavoured, of course, to look into regional mechanisms, including the Space Conference of the

Americas, and also to make a note already at this stage of this Workshop which was held last year, of perspectives for the agenda item 12 on international mechanisms that we will now embark upon in a multi-year Work Plan. So in the report of the Workshop and in the proceedings from the Workshop, there is information that is relevant to several agenda items of the Legal Subcommittee including the item on national space legislation and also the new item, item 12, on international mechanisms.

Thank you Mr. Chairman.

The CHAIRMAN: I should thank the Secretariat very much for providing that clarification and comment and just to remind delegations that this report the Secretariat has just referred to, in addition to the Conference Proceedings, the report on the United Nations/Argentina Workshop on Space Law on the theme "Contribution of Space Law to Economic and Social Development", held in Buenos Aires, 5-8 November 2012, is part of your packet of documents and is detailed in document A/AC.105/1037.

And I should firstly give the floor to the distinguished representative of China and then to Austria.

Mr. L. ZHOU (China) (*interpretation from Chinese*): Mr. Chairman, thank you very much for the second opportunity to make this statement.

The Scientific and Technical Subcommittee at its session in February this year accepted the initiative of the Chinese delegation for a new Regional Centre for Space Science and Technology Education, affiliated to the United Nations at the Beihang University and requested the United Nations Office for Outer Space Affairs to take the lead in organizing and sending an evaluation team to Beihang University. This represents the latest efforts by the Chinese Government in space capacity-building, including capacity-building in space law. This Regional Centre, though to be set up at a university, is open to space industry, space R&D institutions, private and government sectors and will make use of China's space enterprises for practice purposes. We are confident that this new Centre will bring new developments in capacity-building in space law.

Mr. Chairman, as far as we know, the United Nations Office for Outer Space Affairs has already extended invitations to the Permanent Missions of member States to UNOV to draw up the evaluation team. China welcomes this and hopes that the

interested States actively nominates experts for the evaluation team.

Mr. Chairman, the Chinese Government attaches great importance to the preparation for the Regional Centre at Beihang University and will give support and assistance to the evaluation for its work. We are thankful to the Office for Outer Space Affairs for its work and hope that the Office for Outer Space Affairs accelerate the process of relevant work for early establishment of the Centre at Beihang University to contribute to the space capacity-building within the region and also in relevant States.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of China for his statement and should now give the floor to the distinguished representative of Austria.

Ms. I. MARBOE (Austria): Thank you very much Mr. Chairman. The Austrian delegation only wants to inform this Subcommittee about recent actions and initiatives in capacity-building in space law. This information was also submitted in writing as CRP.20.

Space law forms part of the general course in international law which is a compulsory subject at all Austrian law faculties, Vienna, Graz, Salzburg, Innsbruck and Linz. In addition, some faculties offer specialized courses on space law as an optional subject.

At the University of Vienna, two courses are offered on a regular basis, the courses, general legal framework of the use of outer space technologies, and special legal issues of the use of outer space technologies. Not only Austrian students but also exchange students, mostly Erasmus students and students from Australia, show interest in attending these courses which are held in English. Guest professors and lecturers are invited on a regular basis.

Furthermore, space law seminars are held in the summer semester as well as in the winter semester 2012/2013. Students make presentations on current topics and subsequently write a seminar paper.

The University of Graz also offers courses on space law in the summer semester. An officer of the European Space Agency is invited as a lecturer on a regular basis. Approximately 30 students are participating in the seminar. Regularly half of the students are exchange students mainly from South-East

Europe. In order to successfully complete the seminar, the students participate in a United Nations simulation.

In March 2012, the National Point of Contact for Space Law at the University of Economics and Business in Vienna organized an excursion dedicated to space law in Vienna. More than 40 international students had the opportunity to witness the opening of the fifty-first session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, including the Symposium organized by the International Institute of Space Law and the European Centre for Space Law and to visit the European Space Policy Institute.

Six Austrian students participated in the ECSL Summer Course on Space Law and Policy 2012, organized in Pathos, Cyprus. The NPOC for Space Law in Austria selected the Austrian participants. The NPOC is the National Point of Contact for Space Law. And members of this National Point of Contact of Space Law in Graz held a lecture and a tutorial.

In 2013, the ECSL Summer Course on Space Law and Policy will take place in Austria, in Klosterneuberg, near Vienna, between 1 and 14 September. It will be organized with the support of the Austrian National Point of Contact for Space Law and the Austrian Research Promotion Agency.

As regards the space law curriculum, Austria welcomes the work on this space law curriculum under the auspices of the Office for Outer Space Affairs. It will be a helpful tool for professors and lecturers in many different countries. The space law curriculum should be regarded as a continuous task for the Office which should also facilitate regular updates of it.

Thank you very much Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Austria for her statement.

Distinguished delegates, are there any other speakers on this item 10, Capacity-Building in Space Law? Any delegations wishing to make a statement at this time?

I see none.

We will, therefore, continue and conclude our consideration of agenda item 10, Capacity-Building in Space Law, this afternoon.

Review of international mechanisms for cooperation in the peaceful exploration and use of outer space (agenda item 12)

Distinguished delegates, I would now like to continue our consideration of agenda item 12, Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space.

The first speaker on my list is the distinguished representative of Brazil.

Mr. A. J. RYPL (Brazil): Thank you Mr. Chairman. Mr. Chairman, on this agenda item, I would like to recall my delegation's statement under agenda item 3, General Exchange of Views, in which Brazil highlighted the importance for developing countries to have full access to the benefits of space technologies and applications. I would like to outline some of Brazil's international cooperation initiatives that have a focus on the sharing of benefits and capacity-building.

In 2012, on the occasion of the Rio+20 Conference, Brazil and China signed a 10-year Cooperation Plan which paved the way to consolidate and expand space cooperation between the two countries in areas such as remote sensing, data sharing and data applications, launch services, communications satellites, space science and weather satellite applications.

In 2013, Brazil and China will also launch a new satellite in the China-Brazil Earth Resources Satellite Programme, or CBERS-3. With CBERS-3, both countries will continue their "CBERS for Africa Initiative", launched during the Group on Earth Observations Cape Town Ministerial Summit in 2007. With "CBERS for Africa", Brazil and China will continue to provide free satellite and Earth observation data to countries that need it most, and, what is more important, to provide autonomy for developing countries to acquire, process and generate data and information in their territories for the benefit of their own societies. Again, this is in line with Brazil's position that the benefits of space exploration and the use of outer space should be extended to all countries, regardless of their level of economic or technological development. "CBERS for Africa" is also a concrete example of how much can be achieved when developing countries combine their skills and expertise.

Last year, Brazil launched its Brazilian Space Capacity-Building Initiative, through which the Brazilian Space Agency consulted other space agencies to identify research centres and companies in their

countries that would be interested in hosting Brazilian students who will develop activities in specific areas using grants funded by the Brazilian “Science Without Borders” programme. In addition, the programme offers similar opportunities to foreign professionals, researchers, scientists and scholars who would like to join Brazilian universities and enterprises.

I would also like to make a quick reference to Brazil’s participation in the Group on Earth Observations. Last year, Brazil hosted the Ninth Plenary Session of GEO, in which Brazil reiterated its support to an open and free data policy to help ensure that Earth observation and remote sensing data can be used by those nations that need them most.

To close my statement, I would like to inform that, at a later date, Brazil will provide detailed information on the specific legal mechanisms it uses in its cooperation agreements in order to contribute constructively with this agenda item.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Brazil for his statement.

Are there any other delegations wishing to make a statement under this agenda item at this time?

I give the floor to the distinguished representative of Austria.

Mr. P. BITTNER (Austria): Thank you Mr. Chairman. We already highlighted that we very much support this new agenda item and Austria would like to report its cooperation mechanisms that are mainly conducted through multilateral organizations, in particular the United Nations, the ESA, EUMETSAT, the European Southern Observatory and the European Union. Here the relevant programmes are GMES initial operations now Copernicus, Galileo and the Seventh Framework Programme for Research.

Furthermore, Austria encourages the cooperation of relevant Austrian institutions and companies with foreign partners by providing financial assistance to specific projects.

I would also like to highlight that Austria reported this information also in writing which you may find in the document CRP.14.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Austria for his statement.

Are there any other delegations wishing to make a statement under this agenda item at this time?

I see none.

We will, therefore, continue and conclude our consideration of agenda item 12, Review of International Mechanisms for Cooperation in the Peaceful Uses of Outer Space, this afternoon.

Technical presentations

Distinguished delegates, I would now like to proceed with the technical presentations.

This morning we will hear a special joint presentation entitled “The Legal Framework for the International Space Station”.

The presenters are Madam Diane St.-Arnaud of CSA, Mr. André Farand of ESA, Madam Motoko Uchitomi of JAXA, Madam Robin J. Frank of NASA and Mr. Igor Porokhin of Roscosmos.

I now invite the presenters to the podium to make this special joint presentation that will be about an hour in duration.

Distinguished delegates, before we begin the presentation, allow me also to briefly introduce the presenters.

To my far right, from the CSA, Madam Diane St.-Arnaud, is Senior Counsel Manager with Industry Canada Legal Services since 2006. She is responsible for telecommunications law and is now also responsible for legal services provided to the Canadian Space Agency. She joined the Government of Canada in 1988 and worked in the area of radiocommunication regulation, international telecommunications and telecommunications law. She holds a Master of Laws from the Institute and Centre of Air and Space Law of McGill University, Canada, and a Diplôme d’Études européennes from Université de Nancy, in France.

To her left is from the European Space Agency, Mr. André Farand, who is currently Head of the Programme Legal Affairs Division in the Legal Department of the European Space Agency, collaborating with four other legal administrators to provide support to ESA’s programme directorates in setting up and implementing their optional programmes. He has been involved in negotiations on

International Space Station, ISS, cooperation since the inception of the project in 1987, both on behalf of the Canadian Federal Government, the Department of External Affairs, and, starting in 1991, on behalf of the European Partners' Cooperating Agency, ESA. He holds a LL.M. from McGill University's Institute of Air and Space Law in Montreal. His thesis was on Canada's claim against the Soviet Union for damage caused by the Cosmos 954 satellite. He is a member of the Bar of Quebec, Canada. He is the author of many articles, particularly on different aspects of ISS cooperation, and lectures regularly on the same subjects at various European universities.

To my right, from JAXA is Madam Motoko Uchitomi, who is the Manager, Legal Affairs Division for JAXA since October 2012. Ms. Uchitomi was part of the Japanese delegation for the IGA negotiations, as a representative from the Japanese Space Agency. She served for obtaining the Diet's approval of the IGA/MoU at the Ministry of Foreign Affairs as a loaned staff member. As JAXA staff, Ms. Uchitomi participated in various international coordination and projects under the IGA/MoUs. She graduated from Legal Department of the University of Tokyo and holds LLM for International law from Leiden University in the Netherlands. Her thesis for LLM, written in 2000, was on issues of the international responsibility and liability for commercial space activities, based on the interpretation and implementation of space treaties and the comparison of domestic regulations.

To my left, from NASA, is Robin J. Frank who has served as Senior Counsel, International Law and Practice Group, at NASA since 2004. Prior to that time, she worked on international and space law issues at the Department of Justice, the Department of Defence, and the Department of State. At NASA she has worked on many cooperation agreements and mechanisms with the ISS partners. She obtained her Juris Doctor at the New York University School of Law.

And to my far left, from Roscosmos, is Igor Porokhin who is an external legal counsel to the Russian Space Agency. As a member of the Drafting Committee he participated in the development of Protocol to the Cape Town Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets and also was a member of the Russian delegation at the Diplomatic Conference on the adoption of the said Protocol. He served as a legal advisor of Roscosmos in numerous commercial projects relating to the ISS and other space missions. Igor Porokhin is a correspondent member of the

Russian Academy of Cosmonautics, a member of the Russian Bar Association and honorary member of the Moscow Regional Bar. He graduated with honours from the Faculty of Law at the University of Moscow and also holds a Diploma with honours from the Russian Academy for Foreign Trade.

Distinguished speakers, the floor is yours now.

Ms. R. J. FRANK (NASA): Next slide please. Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, I will now provide a short overview of our presentation this morning. Mr. André Farand from ESA will provide an introduction to the Space Station Legal Framework. Then Ms. Uchitomi will discuss cooperating agencies and the special situation for Japan. I will briefly discuss funding of the Space Station. Diane St.-Arnaud from CSA will speak next to address liability and the Space Station's cross-waiver. André will then turn to jurisdiction and control over persons with a particular emphasis on the special situation with the European Partners. Ms. Uchitomi will discuss the usefulness of the IGA in facilitating cooperative activities. Then my colleague, Mr. Porokhin, for Roscosmos, will describe the legal framework for commercial use of the ISS. Then Mr. Porokhin will also describe the situation with space flight participants. Finally, I will speak to the use of the ISS for space exploration beyond low-Earth orbit.

Thank you.

Mr. A. FARAND (ESA): Next slide please. In considering the legal framework governing the ISS cooperation, it is important to note that the Partner States' main objective was to regulate specific aspects of a permanently inhabited multinational research-oriented facility in outer space. In this connection, the Station has been inhabited by a crew of three members since November 2000 and with a crew of six individuals starting in May 2009.

The framework itself has three layers. It is a three-tier legal framework. First, there is a multilateral intergovernmental agreement. We referred to that as the IGA. The latest one was signed on 29 January 1998. It replaced the original IGA signed in September 1988 before the arrival of Russia in the Partnership. Now, why having an international agreement at State level for such a cooperation, there are many reasons. One is because it was envisaged that the cooperation would last at least 30 years (two or three years?) which is happening now. Also financial resources were required for a long period of time at a very significant level so the backing of States was important. And also

for such a cooperation, there was a need to address topics far beyond the competence of the jurisdiction of space agencies. One obvious example, as we will discuss later, is criminal jurisdiction. Only States can address such kind of issue.

A second layer in the legal framework is the fact that we have now four Memoranda of Understanding. One, and they are similarly worded, and they are between NASA and each of the four cooperating agencies, CSA, ESA, the Government of Japan and the Russian Space Agency. They were signed, the majority of them, the same day as the IGA in 1998. And also as a third layer of this framework for cooperation, you have a number of implementing arrangements, negotiated and concluded as needed from time to time. These implementing arrangements always link NASA with one other cooperating agency. As we will see later, they are instruments very useful to address something which is important in the cooperation which is the barter of services to pay for the different partners obligation. We call that enough said of the obligations and that is done through NASA in implementing arrangements.

Next slide please. So Article 1 of the IGA addresses the political dimension of the cooperation. It says, the IGA establishes a long-term international cooperative framework on the basis of genuine partnership for the design, development, operation and utilization of a permanently inhabited civil international space station for peaceful purposes in accordance with international law. As you imagine, these terms were heavily negotiated at the beginning of the Station project.

Now from a political standpoint, although there is a genuine partnership, there was some importance given to distinguishing among the different provisions by the Partners. That is why Article 1 says that the United States and Russia will produce elements serving as the foundation of the ISS.

Also a second distinction, the European Partner and Japan will produce elements that will significantly enhance ISS capabilities. Both the European Partner and Japan are providing laboratories for research on board the Station.

And finally, Canada's contribution will be an essential part of the ISS.

So that is the political description of the contribution.

Also it is mentioned that the Partners will join their efforts under the lead role of the United States for overall management and coordination to create an integrated ISS.

Next slide please. Important to note is the fact that in the IGA you have an express reference to the applicable United Nations conventions applicable to ISS cooperation. They are the four listed here, the 1967 Outer Space Treaty, the 1968 Rescue and Return of Astronauts Agreement, the 1972 Liability Convention and the 1975 Registration Convention. So that is the reference to the application of international law to this cooperation.

Next slide please. As I mentioned, there is a three-layer official legal framework but there are many other arrangements, agreements of all sorts and also what we call programme documents which are agreed from time to time between different partners, for example, for the use in cooperation of utilization rights on board the different modules or to address things like of space flight participants, what are the criteria for these flights, or documents like, and we will detail that later, the Code of Conduct applicable to the crew.

Ms. M. UCHITOMI (JAXA): Next please. This is a basic framework of Article 4, Cooperating Agencies, signers of the multilateral IGA and bilateral MoUs and designated Cooperating Agencies for the implementation.

Let me comment on the unique situation in Japan for the Cooperating Agency. Since there are some articles in the MoU that exceeded the authority of the Cooperating Agency, MEXT, it was necessary for the Government of Japan to sign not only the IGA but also the MoU. Therefore, Japanese designation of MEXT, as a Cooperating Agency, it is stated in the MoU. At the same time, the MoU specified that JAXA, the Space Agency, may assist MEXT for the implementation because JAXA is the core space agency to support space activities by the Japanese Government.

Ms. R. J. FRANK (NASA): Next slide please. Under the Intergovernmental Agreement, each Partner bears the cost of fulfilling its respective responsibilities under the IGA and MoUs, as well as the implementing arrangements that ESA mentioned. This Article of the IGA sets forth procedures for the Partnership to follow if one Partner has trouble fulfilling its contributions because of its internal situation. And I will say that the United States Government has certainly appreciated this important

flexibility. As many of you know, in the past, the United States Government has not been able to fulfil all of its responsibilities because of problems in obtaining funding from our United States Congress and we provide many thanks to our Partners for successfully working through these problems in still creating an important facility in low-Earth orbit.

Finally, the Partners seek to minimize the exchange of funds and engage in cooperative activities such as barter rather than exchanging funds. Thank you.

Ms. D. ST.-ARNAUD (CSA): Next slide please. I will present the liability regime of the ISS.

From a legal perspective, this is a key element that needed to be agreed upon for the Partners who engage in a novel(?) and they were aware of the magnitude of the ISS.

The regime turns on the creation of a cross-waiver of liability. Essentially, each Partner agrees to not bring a claim for damages against the other Partners. Overall, it prevents claims among Partners in relation to the ISS activities.

Next slide please. One may wonder what is the reason for creating a cross-waiver. It is necessary because of the risk inherent to participating in such a project with a very high monetary value. The cross-waiver allows for a level of cooperation that might not(?) have been achieved if the prospect of legal claims was not addressed between Partners.

Next slide please. In that sense, sorry I am still on the previous slide, I am still on slide 10, in that sense, they set a purpose for establishing a cross-waiver in the IGA is in the interest of encouraging participation in the exploration, exploitation and use of outer space to the Space Station. Ultimately, it served the broader purpose of the Outer Space Treaty to promote international cooperation in space.

Slide 11 please. So what does it mean? It means that each Partner assumes its own risk with some exceptions. The key points are that the cross-waiver applies if the person causing the damage is involved in the ISS activities and the person suffering the damage suffered it in the context of its involvement in the ISS activities.

Next slide please. So what is covered by the cross-waiver of liability? Space activities protected by the cross-waiver are defined as protected space operations. They simply include all related ISS

activities, launch activities, Space Station activities, payload on Earth, in outer space or in transit, research and design, etc.

Next slide. How does the cross-waiver apply to all those entities involved in the research, design, development, test, assembly, etc., of the ISS? The cross-waiver actually extends to related entities of each Partner. Related entities include contractors, sub-contractors, at all tiers as well as users and customers at all tiers including their own contractors and sub-contractors.

Partners required their related entities, usually by contract, to waive all claims against the other Partners and the Partners' related entities.

Next slide please. What are the main exceptions to the regime? Within a Partner's group, which is comprised of a Partner and its related entities, the cross-waiver does not apply, such that claims between a Partner and its related entities or between its related entities are not covered. Other exceptions, claims by natural persons for bodily injury or death, claims based on wilfulness conduct or intellectual property claims.

Next slide please. Interaction with the Liability Convention. The general principle is that the Liability Convention continues to be applicable. It is only in the case of the exception provided for in Section 16 of the IGA that the ISS liability regime is applicable. All conditions of Section 16 must be present for the ISS liability regime to apply. As we have seen that the Partners agree to essentially is to not bring claims against each other. In that sense, the IGA is seen as being as consistent with the Liability Convention where it is has a right to claim that you have under the Liability Convention, and here under the ISS liability regime, the Partners simply agree not to bring claims.

Next slide please. In conclusion, the ISS liability regime creates a legal wall between the five Partners' groups for the purposes of the ISS. The ISS liability regime was crafted to co-exist with the Liability Convention.

Thank you.

Mr. A. FARAND (ESA): Next slide please. Concerning the jurisdiction and control to be exercised by the Partners and Partner States, there is a general provision in Article 5.2 of the IGA that says "each Partner shall retain jurisdiction and control over the elements it registers and over personnel in or on the

Space Station who are its nationals". So this addresses both the hardware side of things and the personnel, the astronauts, serving on board the Station.

Now, when we address the goods, the hardware, it says in the IGA that "each of the Cooperating Agency shall own the elements that the Partner respectively provide". Elements here, they are, in short, the modules, user elements are the laboratories provided, for example, by Japan and by ESA. There are resource elements, an example of that, the most obvious one is the _____(?) Arm and the Manipulator provided by Canada. So either you provide user and resource elements but at the end it is the Cooperating Agency that is the owner of such elements. It is also the owner of the equipment in or on the Space Station. So elements and equipment.

Another thing which is important to note that each Partner State has taken steps before ratifying the IGA to translate into their domestic legal systems their ISS cooperation-related obligations. For example, Germany, France and Canada have adopted the IGA itself as a law by their Parliaments and so it becomes the law of the land and they can exercise at domestic level jurisdiction and control actually over the elements they have provided.

Next slide please. Another interesting thing. When we look now at the jurisdiction on the personnel, it is this little phrase "who are nationals". Up to now, there was no real difficulty in a sense that all carrier astronauts have been always nationals of the IGA Signatory States providing them. When we say carrier astronauts, they are the ones doing the expedition crew which lasts up to six months duration flight in orbit in the Space Station.

Next slide please. Now I would like to just address a number of specific issues for the European Partner. As is the case for all the Partners, Article 4 of the IGA designates who is the Cooperating Agency for each Partner. Canada is CSA, Japan is the Government of Japan, but for Europe it is ESA, the European Space Agency which is not a government agency but rather an international intergovernmental organization, an organization that has a legal personality at international law which is distinct from the governments having signed the IGA.

More than that, the European Partner States, the 11 Signatories from ESA member States, having signed the IGA discharge their obligations and exercise their rights for the participation in the ISS Cooperation through an ESA Optional Programme. So they do not do that individually. They are, let us say, linked by a

programme which is, in fact, an activity of ESA funded by the States having chosen to participate. So in a nutshell, a programme in ESA, it is up to each member State to decide how much of the financial envelope it wishes to subscribe. In the case of the Space Station programme, the three main contributors are Germany, France and Italy and there are eight other participating States, so 11 in total out of the 20 member States of ESA.

There is this particular role for ESA also in registering the Columbus Module, for example, which it has done on 5 March 2010, because ESA has accepted, as an international organization, the obligation under the Registration Convention. So this is also a particular case for Europe.

Next slide please. Obviously, when designated under Article 4 for the Cooperating Agency of Europe, ESA has to act for all purposes connected with the cooperation but obviously only on matters delegated within the purview of ESA's mission under its Convention. So, in other words, the European Partner States themselves remain individually competent for matters falling under the States' prerogatives. The most obvious one again, criminal jurisdiction, but it extends to other issues like liability over elements and personnel and also some matters of intellectual property. So it is a sharing of responsibility between the Organization and the States themselves.

Another specific issue for Europe is the fact that all European astronauts are staff members of ESA, meaning that they benefit from privileges and immunities in Annex I to the ESA Convention, for example, and they relate to the ESA Director-General as a matter of conduct of their responsibility. But obviously, also there is a sharing of responsibility with the States themselves, criminal jurisdiction, acceptance of the Code of Conduct as we see. These are a specific situation for Europe.

Next slide please. I would like to address now more specifically the jurisdiction over personnel, meaning over astronauts and one central element in there is the fact that we have developed an ISS Crew Code of Conduct which is a programme instrument. It is not an international agreement. It is a programme instrument governing the behaviour of astronauts from the time they are designated in a crew until they come back from their mission on board the Station. At the time the IGA and MoU were signed in January 1998, there was not yet a Code of Conduct. It took a year and a half to develop such a text and it was a truly a multicultural exercise in this sense that you have for this negotiation carrier astronauts from all the Partners

and also lawyers that brought their experience together and develop that Code of Conduct. That contains in the Annex a disciplinary policy.

The Code of Conduct itself was approved by the MCB because the cooperation is governed by a number of the cooperation bodies and the Multilateral Coordination Board, it is the Director-level, the highest level of the Coordination Board, approved the Code of Conduct in September 2000.

Next slide please. Also addressing jurisdiction on personnel is something which is not really applied, often it is never applied but it is there, it is regulated. It is criminal jurisdiction in case an astronaut is involved in misconduct on orbit that affects the life or safety of a national of another Partner State or occurs in or on or causes damage to the flight element of another Partner State. Then the rule for envisaging prosecution, looking into whether there is sufficient ground to lay charges against an individual, an alleged perpetrator, only the State of the nationality of that alleged perpetrator can do that. Obviously it constitutes a restriction over the general rules which I explained, Article 5.2, which also extends to the modules themselves. For that, it is only for criminal jurisdiction only related to the nationality of the alleged perpetrator.

Obviously, there is a possibility for the victim Partner State to prosecute but the possibility is so much restrictive that it rather a remote possibility in the sense that only the victim can intervene if the State of nationality refuses to look into evidence to assess whether there is a basis to lay charges against its national. If it does look at evidence and concludes that there is no charge possible, then the victim State is precluded for exercising prosecution. So that is a really remote possibility but it is there, it is Article 22.2 of the IGA.

The Article 22 also deals with extradition. As you know, all the ISS astronauts are coming back in Kazakhstan, supervised by the Russian Partner so there is a possibility if an alleged perpetrator of another Partner State does not want to come back by its own means or by the means provided to him, there is an extradition bases for that specific case for the Space Station Cooperation.

And finally, there is a provision talking about mutual legal assistance. It is a provision that encourages all the Partners to cooperate to bring back evidence that could be assessed by courts in the matter of criminal prosecution. But this, as I say again, is a very remote possibility.

Thank you.

Ms. M. UCHITOMI (JAXA): Next please. Mr. Chairman, distinguished delegates, I am pleased to address how the IGA is used for facilitating international space cooperation from the viewpoint of a space agency.

As a member of the Japanese delegation for the IGA negotiation and after the Agreement, I have experienced various projects and negotiations under the IGA and MoU as the legal staff in Jana's Directorate for the International Space Station.

Let me introduce examples of the IGA articles which provide useful conditions to facilitate international cooperation.

Article 18, customs and immigration provides the responsibility of the Partners to facilitate the movement of persons and goods, facilitate provision of the appropriate entry and residence documentation and grant permission for duty free importation and exportation. This Article greatly contributes to the smooth and speedy implementation avoiding bureaucratic delay and save the financial and procedure costs to facilitate international cooperation.

It is rare in Japan to actually _____(?) tax exemption for imports and exports but thanks to the IGA, the multilateral Intergovernmental Agreement, the ISS Programme gained this and enabled international interactions to proceed very smoothly.

Next please. And it is not just the customs article that creates efficiency in the implementation of the Programme, due to the existing of the IGA Articles related to the exchange and treatment of data and goods also contribute to creating efficiency.

IGA Article 9, exchange of data and goods, and IGA Article 20, treatment of data and goods, provide responsibility of the Partners to facilitate exchange and transit of technical data and goods necessary to implement the ISS Cooperation.

It provides the clear mechanism for the treatment of technical data and goods, protected for export control purposes and technical data protected for propriety, rights purposes. These protected data and goods should be marked with notice or otherwise specifically identified. The protected data and goods are used only for fulfilling responsibility under the IGA and MoUs only by the receiving Cooperating Agency and its contractors and sub-contractors.

These articles contribute to facilitate the smooth and speedy implementation by realizing exchanging protected data and goods necessary for the cooperation.

Such measures are extremely important to promote ISS utilization since they provide a clear scheme of the protection for the users.

It should be noted that the Partner States are not required to transfer any technical data and goods in contravention of its national laws or regulations. I think that _____(?) for States to maintain consistency with the national laws and regulations was a smart solution in order for the large number of the participants to manage to reach an agreement in the IGA negotiations.

Next please. Now I would like to briefly explain the framework of ISS utilization.

Article 9 of the IGA provides the basic rule to deliver the utilization rights to each Partner. Then MoUs specified a detailed percentages of the rights of the Partners for the resource to utilize the ISS.

It is important that in Article 9.3 declares that equitable sharing of the costs among the Partners and there is responsibility for the percentage of the sharing of the common system operation costs, SISULK(?), or activities, is equal to the percentage of the location of the utilization rights.

Please look at the chart. In principle, utilization rights and resource as a Russian segment are independently managed. This is mainly because of the history when Russia newly participated in the ISS by the 1998 IGA, there had been the existing cooperative mechanism among the Partners of 1988 IGA among the USA, Japan, Europe and Canada.

Let me explain the mechanism among the USA, Japan, Europe and Canada.

Article 9 of the IGA stipulates that utilization rights are delivered from Partner provision of user elements, industrial(?) elements or both. Therefore, as providers of industrial(?) elements, NASA and CSA retains the rights to use a fixed percentage over the European and Japanese laboratories. The percentage of the utilization resources rights for crew time and rights to send a crew to the ISS, are fixed rate. NASA for 76.6 per cent, Japan for 12.8 per cent, ESA for 8.3 per cent and CSA for 2.3 per cent. This is a baseline for each Partner to utilize the ISS.

Next please. Now let me show you an example of user elements of the ISS.

One of the major elements provided by Japan is the Japanese Experimental Module, Kibo. Kibo consists of a pressurized module exported facility experimental module, GM(?) remote manipulator system, GMRS and GM Airlock.

As a consequence of the provision of Kibo and other elements, Japan obtains the 12.8 per cent of the right for the utilization of resources such as crew time and electricity on board except for those rights retained independently by Russia. And at the same time, Japan shares 12.8 per cent over the common system operating costs with NASA, ESA and the CSA. Japan retains 51 per cent accommodation rights of Kibo and provides for the nine per cent utilization right to NASA, ESA and CSA to use Kibo.

Japan wishes Kibo to be utilized more and more, not only in Japan but also in foreign countries, especially in the Asia-Pacific region for their socio-economic development.

Next please. Thanks to the useful mechanism to utilize Kibo and the ISS, various outcomes have been realized. I would like to introduce several examples.

One is protein crystallization on board Kibo. Many pharmaceutical companies are now interested in using Kibo and other ISS laboratories as a tool to develop new medicine. The ISS is greatly contributing to the welfare of human beings.

The second case is a commercial film taken on board the Space Station which was successfully carried out by the cooperation between JAXA and Roscosmos under the IGA/MoU regime.

Through promoting such a commercial utilization by the companies, we hope space will be more familiar with the people providing them a new feeling, culture, lifestyles and innovative businesses. These companies are doing business in an extremely competitive market. Therefore, it is important for the companies to secure business secrets and confirm predictability in their activities they do on the ISS.

Thanks to the clear conditions for the implementation provided by the IGA and MoUs, such utilization by companies has been realized and increasing.

Thank you.

Mr. I. POROKHIN (Roscosmos): One of the ISS objectives is specified in Article 1 of the Intergovernmental Agreement is to enhance commercial use of outer space. And now, after 15 years of ISS activities in the orbit, we can see with a little pride that the ISS has successfully achieved this objective.

The ISS project has become a trigger of commercialization of new sectors of space activities.

Here on this slide you can see the new fields of commercial activities in space which were triggered by the International Space Station project.

Transportation services for delivery of people and cargo to space.

Before the ISS project, space vehicles which deliver cargo and people to the orbit were exclusively owned by governments. Now space vehicles are being delivered and manufactured also by private companies from private funds. The most illustrative example here is private space vehicles Dragon which deliver cargo to the ISS upon NASA orders. Delivery of cargo(?) by private spaceships is the natural in the near future.

Space tourism. The self-funded flights of space tourists on board the Russian Soyuz space vehicles to the ISS showed a big commercial potential here and traded sellers of privately funded projects.

The most advanced project now is the sub-orbital spaceship project for Richard Branson. Under consideration, there are still projects on developmental space hotels with permanent existence in the orbit.

Space advertising. The first steps in this direction has been made with advertising by Russian cosmonauts of such brains as Peter Hutt(?) Kordoc(?), Canadian Gulf Company Element 21.

Another example is the Russian/Japanese Advertising Project which had already been mentioned by the JAXA representative. They are shooting on board the ISS for a commercial-based Japanese advertising company, DENSO(?).

Space commercial experiments. There have been implemented a number of experiments on board the ISS with commercial involvement. Above all, in the pharmaceutical, medical and communications fields. Though it is too premature to say about the boom of such experiments rather about the course of

interest. There is definitely a potential for such commercial experiments in the future.

Next slide please. Article 9 of the IGA establishes the principle that the ISS Partners are free to dispose of those ISS resources they get in return for their contributions into the ISS programme. Such ISS resources are called allocations.

The ISS Partners are also free to determine the terms and conditions of their contracts and agreements. The ISS Partners may barter or sell such allocations to each other and that is the most common situation. They can also sell such allocations to users which are third parties. There are some limitations of such sales which I will try to touch upon in the next slide.

Here on this slide, you can see the most valuable resources of the International Space Station. The _____(?) power storage, crew time, extra(?) vehicular capacity, transportation of people and cargo. They serve the subject of the ISS Partners transaction between themselves and with third parties.

The commercial relations between the ISS Partners arriving _____ (*not clear*) are substantial. For example, Roscosmos budgets from NASA(?) substantial amounts of electrical power, storage, capabilities and the communications services. In this term, after the retirement of circle space vehicles, NASA and other Partners pictures from Roscosmos on a permanent basis services for delivery of their crews and cargo to the Station on board the Russian Soyuz and Progress space vehicles.

They also purchase from Roscosmos rescue services which are aimed at the rescue of crew members from the Station in case of emergency. These rescue services are provided by Russian Soyuz space vehicles which are permanently docked to the International Space Station.

Another example is about the regimen between Roscosmos and the European Space Agency. ESA provides to Roscosmos specialized computers and associated equipment for the data management system of the Russian segment to the Station, while Roscosmos provides to ESA ISS resources for an _____(?) automatic transportation vehicles.

There are also a number of contacts under which is the purchases from Roscosmos operations support services for each space vehicle it releases(?).

There are numerous cooperation agreements between Roscosmos and ESA and between Roscosmos

and JAXA on conducting joint scientific experiments on board the ISS.

Next slide please. As mentioned above, the ISS Partners are free to transact with third parties. However, such freedom is subject to certain limitations when it comes to States and entities under the agreed jurisdiction(?) which are not ISS Partners.

There are two articles in the Intergovernmental Agreement which address such a situation. Article 6.4 provided the prior consent of all the ISS Partners as needed when it transfers ownership from an ISS Partner to a non-partner.

Article 9.3 goes through that States that in the use when a non-partner or when research and let facilities of an ISS Partner requires a prior notification and consensus of all the other ISS Partners.

It should be noted that the scope of involvement of non-partners into the ISS utilization is really impressive. There was a meeting of the ISS Multilateral Coordination Board and it was announced that 68 countries participated in the ISS utilization.

Next slide please. Space flight participants. This term is used to distinguish professional cosmonauts and astronauts of the ISS Partners from two other categories of crew members who fly to the ISS.

The first category of space flight participants are professional astronauts from countries other than the ISS Partners. Up to now there are three flights of such astronauts to the ISS and namely from Brazil, Republic of Korea and Malaysia.

The second category are self-funded non-professionals also called the space tourists. Up to now there are eight flights of space tourists to the ISS.

SFP flew to the ISS on board the Russian Soyuz space vehicles for a set term _____(?) for 10 days. As a rule, each SFP had a substantial programme of specific experiments.

All of SFP's flights are properly coordinated among the ISS Partners with standard ISS procedures and non-partner SFP's receive the consent of all ISS Partners.

Next slide please. Each space flight participant has to meet the ISS crew selection principles and criteria. These principles and criteria involve an assessment of their SFP biography, medical

examination including behavioural suitability and adherence to the ISS Code of Conduct of Astronauts.

Each SFP undergo special training for space flights as a part of the ISS crew.

It should be specifically noted that the ISS cross-waiver does not apply to SFP's as natural persons and, therefore, this issue should have been addressed contractually. The contractual approach usually consists of three main elements. First, an SFP spirit of _____ (*not clear*) and assumes all the risks associated with the space flight. Second, the SFP contractually waives any claims towards the ISS Partners for any damage to his or her property or health. Third, a waiver of the SFP of claims towards the ISS Partners may be not recognized when applicable national law.

Each SFP is obliged to procure liability insurance from claims that he or she, his or her heirs, dependants and insurers may assert towards the ISS Partners for any damage to an SFP's property or health, including death.

Thank you.

Ms. R. J. FRANK (NASA): I will now speak briefly about the use of the space exploration on low-Earth orbit. All five space agencies are focusing attention on utilizing of the Space Station that is important on the ISS itself, that is important to life on Earth and that will support human and robotic exploration beyond low-Earth orbit. Unlike the utilization activities my colleagues from JAXA and Roscosmos have spoken about, here I refer to scientific experimentation.

Next slide please. Utilization agreements need to be fully consistent with the existing ISS legal framework. In some instances, the framework of the IGA and MoUs left issues open for later decisions for particular collaborative activities, for example, intellectual property rights, data rights and allocation of costs.

Next slide please. My colleague from ESA described implementing arrangements earlier. The 2012 NASA/ESA Implementing Arrangement builds on the strong cooperative relationship between NASA and ESA. It expands the partnership to exploration activities beyond the Space Station. My colleague from JAXA spoke about common system operating costs being shared among the CSA, ESA, JAXA and NASA. In this instance, the European Space Agency, with the approval of the European Ministerial, has

agreed to pay part of its common systems operating costs through cooperation with NASA's missions beyond low-Earth orbit.

We look forward to collaborating with other partners in human and robotic space exploration beyond low-Earth orbit. The political will for such exploration must continue to develop and the realities of funding must continue to be addressed.

As Mr. Gerstenmaier said last Friday, the United States Government looks forward to fruitful cooperation with many of the States present here today.

Thank you.

Next slide please. In conclusion, the implementation of ISS cooperation over the last 15 years has shown that, including from the legal standpoint, the partnership has been able to adapt to the different situations even when difficult or dramatic circumstances materialized and respond to the specific needs arising from time to time. The IGA and the four MoUs have been flexible enough to provide an adequate legal framework for the functioning of the partnership without the need for amendment while the implementing arrangements and other arrangements of programmatic instruments have been developed as needed.

Thank you.

Next slide please. Mr. Chairman, if you will, the representatives are prepared to respond to questions. Thank you.

The CHAIRMAN: I thank the representatives of space agencies for this special presentation. I now open the floor for any questions to the presenters.

I see the distinguished representative of the Netherlands.

Mr. R. LEFEBER (Netherlands): Thank you Mr. Chairman and many thanks for the comprehensive presentation and I also enjoyed the way in which it was presented that you took turns in presenting it and I think that worked very well.

I have two questions relating to the exercise of jurisdiction.

There is an elaborate arrangement to address misconduct in orbit. My first question is, has there ever been any misconduct? And I am aware of the fact

that the astronauts are trained very well but I was just wondering whether you have gained any practical experience in applying the elaborate arrangements that you have.

And the second question relates to the implementation of the ISS Agreement. It was mentioned that some States have actually adopted national legislation and reference was made to Germany in order to implement the ISS Agreement. Other States, such as the Netherlands, which is also a participating State, has not. We have a different legal system when it comes to the application of treaties and we have a system in which treaties can be applied without the need to transpose them into the domestic legal order. But, still, I was wondering whether from your perspective it would be necessary for all States to implementing the ISS Agreement in domestic legislation so whether we are leaving any gap and whether we should take another look at the ISS Agreement from the side of the Netherlands.

Thank you.

Mr. A. FARAND (ESA): If you would allow me I will answer both questions. On the first one, I can confirm, I think, on behalf of everyone that we have no experience on that kind of misconduct covered by Article 22, criminal jurisdiction, having not realized over the last 15 years. I think more interesting would be to see what is happening under the Code of Conduct because the Code of Conduct, in fact, in Article 11 of both the IGA and the MoU, addresses specific items of the behaviour of the astronauts, their relationship with the Commander, their relationship with the experiments and I would not say there are misconducts there but there are interactions that are very interesting to be monitored and on that it is a case where there is no contrary, we see it, it is not a misconduct but there is a relationship under the Code of Conduct which is very interesting to look at and we are monitoring that.

As for the manner in which each of the participating Partner States have decided to implement at national level their commitments under the IGA and MoU, as you say, it relates to their legal system, how it is constructed, how it is applied. But I think the practical issue is more how, let us be very concrete, a judge from a court in a given country among the 11 States, let us say, our shareholders of the Columbus Module, the European States, would react if there was a claim presented on, let us say, intellectual property matters, to their court, will they find that there is sufficient ground under what their country has done to implement Space Station cooperation so they can take jurisdiction over the case presented to them.

So we never had, to my knowledge, specific issues of intellectual property or others or claims where judges had to pronounce themselves on jurisdiction. But that is really the preoccupation we can have if we are continuing and broadening the cooperation and the experiments, etc.

I would believe that for the countries having adopted the IGA as a national law, there could be not too much confusion about that. On others, maybe there will never be a case in the Netherlands or in Italy, for example, on issues where a judge would have to pronounce himself but that is more the preoccupation I have. There are, in other words, how do we qualify what I call legally significant facts happening on the Station, in Columbus in particular, *vis-à-vis*, the national domestic legal system, how can they intervene and qualify that fact. I was sometimes talking about weddings taking place on board the Columbus Module. There was a wedding many, many years ago between a cosmonaut and a lady in Texas, his wife. So this is a legally significant case. How would it be judged under Dutch law? How it can be applied? Is it a valid marriage? Would the electronic consent be accepted? That is the kind of legal issue that we have to look at.

Thank you.

Ms. R. J. FRANK (NASA): What I would simply add on behalf of the United States, we had the domestic authority to implement almost all of the IGA provisions without specific implementing legislation. Of course, for the United States, most treaties are not self-implementing so we needed to have domestic legislation in place. With respect, the one exception is with respect to intellectual property rights and intellectual property rights that might be created on the United States elements. In that instance, we needed to enact legislation and we did too to provide a basis for a legal claim to be brought in the United States courts.

Thank you.

The CHAIRMAN: Distinguished delegates, if you will allow me, given the theme of intellectual property that has just been addressed, I noted in the course of your presentation, for which I shall thank all of the presenters for an excellent range of issues concerning this endeavour, the International Space Station, but I did note the reference specifically to cross-waiver of liability which is not applicable, and please correct me if I am misrepresenting the presentation here, but it does not seem to be applicable to intellectual property disputes, on the one hand. And I gather that there is national legislation implementing

these international obligations as it concerns intellectual property and it makes me curious as to how the process for establishing intellectual property rights under this Agreement complements or differs from the established, perhaps first to file, first to invent process, that is applicable today.

Recalling, and in a positive way, that the cross-waiver of liability clauses from the presentation appear to have been drafted to co-exist with the Liability Convention and that, which is a comment now, answers the question to some extent which was raised yesterday under one of the items on our agenda of international cooperation. So the question really is about intellectual property cross-waiver in the context of the established process of establishing intellectual property rights but not in space, if that is clear.

Mr. A. FARAND (ESA): Maybe I will try to answer your question. Intellectual property is addressed in Article 21 of the IGA. But Article 21 deals with mainly two issues. The fact that in the United States it is really the first to invent which may be granted a patent, while in other countries, it is the first to file for a patent that may be given a patent. Article 21 creates an assumption that if an experiment has created an invention on board the Station, it could be assimilated, the module way it was done, to the territory of the State where this was done and facilitate at least under United States law the granting of patents. So that is one assumption of Article 21.

And the other assumption is a group of assumptions for the European Partner because since we are now talking about 11 different States, it says, among other things, that if a licence for the use of intellectual property is validly given in one of the 11 countries, it should be valid and considered valid in all the European Partner States' countries. So that is for what Article 21 creates.

Now, as you mentioned, Article 16 mentioned expressly that intellectual property claims are not covered by the cross-waiver. That means if you have a litigation on the use of a licence, the validity of the licence, etc., it goes to court, you cannot hide behind the cross-waiver. It is not applicable to that.

But, in fact, in reality allocation of intellectual property rights is also governed by the contracts between the contractors providing goods and services for the Station to their space agencies, the users providing experiments for the Station. So really what is happening in terms of intellectual property is also governed by a series of contracts, agreements with the institute of research and the reality is that if there is an

invention, if there is a patent to be secured for that, it will happen on Earth under the laws applicable in the country where this has taken place, in view of the agreements that have been concluded.

So the Space Station, the assumption of Article 21, are quite different from the reality. The reality is really you have to look into the agreements and contracts with all the parties involved in some form of use of Station.

Thank you.

Ms. R. J. FRANK (NASA): Did any of my other colleagues wish to speak to this question?

Ms. D. ST.-ARNAUD (CSA): Just quickly to add that because it is an exception to the application of the cross-waiver, what it means is that if there was a liability question that was raised in relation to the Liability Convention, the regime of the Liability Convention would be applicable as it pertains to intellectual property.

Thank you.

The CHAIRMAN: Thank you very much for clarify the question and thank you for the response to the comment.

I should now give the floor to the distinguished representative of Austria and then to the distinguished representative of Italy. So if you can take the questions and then the panel can proceed with providing answers.

Ms. I. MARBOE (Austria): Thank you very much for this really very interesting presentation. Also I like the way very much how it was presented. Thank you really very much for this.

I have one question regarding the selection of projects. On the one hand, a scientific project, research projects, and on the other, commercial applications. How is the process to apply for a research project at the ISS? How a university has applied, for example, where do they turn to? And then one the other hand, a commercial project like the film crew you mentioned, where do they apply if they want to do something on the ISS? And how this is decided upon.

Ms. R. J. FRANK (NASA): I fear that you are talking to a group of lawyers. One of my colleagues, I am sure, will have more of a response but I know that for the United States persons requesting or institutes requesting to use the United States

contribution segment of the ISS, we have domestic legislation that was enacted in 2005 that designates our part of the Space Station as a national laboratory and NASA has entered into agreements with fellow agencies, for example, the National Institute of Health, with private companies such as pharmaceutical companies and with academic institutions to allow them to make use of the United States facilities. Today, we have not had a problem with accommodating all interested users.

Thank you.

Mr. A. FARAND (ESA): Concerning ESA and the call for projects, there is a specific optional programme in ESA parallel to the ISS participation which is called ELIPSE, which provides funding and what happens is that there is an open call for projects on the Internet and we receive, normally from research institutions in our member States, and from consortium of many institutes, and that is the interesting part, there are many institutes participating in one project, a series of proposals in different, let us say, scientific activities or science or materials. And then we receive all that. We classify all that. We analyze the feasibility and we retain in an order, a list what would be possible to fund because we also have to look at the availability of funds. And finally, our participating States approve the list of experiments in the frame of the optional programme.

Now, once that is approved at the Partnership level, there is a process where each of the five agencies file their programme of experiments for the next five years. Obviously, it is more detailed in the coming years and less details in the fourth or fifth year, so what we put together is a plan of use of the Station which is composed of the five plans of each of the Partners put together and that is our programme of work for experiments but each agency has its own procedure and process for selecting experiments.

Ms. M. UCHITOMI (JAXA): As my Russian colleague explained that there is an IGA, the obligation to require the prior notification and to get the timely consensus for the utilization of _____(?) for non-partners and also that under the IGA and MoU specified that a scheme for coordination of a system operation and utilization operation for the schedule and resources among the Partners, there is the multilateral coordination. And then under this multilateral scheme there is a right for the Partner to choose the users and so for the commercial film shoot in cases. And also, of course, JAXA has the promoting project to utilization not only for Japan but also for the foreign uses and then we choose the users and then we announce them

to get consensus from the Partners and then to negotiate for the commercial film shooting with Roscosmos for the actual contracts under the IGA and MoU.

As mentioned by the Chair that there are some not clear conditions for IPL or something, so in such a case, we coordinate with our Russian colleagues in the contract for the detailed conditions for the rights of the film shooting. It is very critical for the company. So then we try to coordinate with Roscosmos to delivery of the conditions which is satisfied by the company. Then we can implement the project successfully. There is the kind of coordination, international cooperation from the scheme of the IGA multilateral coordination and ends in a coordination among the Partners and then bilateral coordination to implement by the contractual regimen(?). That is key.

Mr. I. POROKHIN (Roscosmos): So I would distinguish here a national aspect from an international aspect with not only respect to national aspects.

There is a national programme of experiments in Russia which is based on applications from scientific institutes, Academy of Sciences, the universities and so on and so on, and this on a non-commercial basis for sure.

With respect to international aspects, they may be commercial and they may be non-commercial and there is a real shift to non-commercial cooperation. The commercial relations are most in respect to services. So transportation of crews to transportation of cargo but when it comes to experiments, this is mostly cooperation between different agencies on a non-commercial basis. There may be barter or mostly this is cooperation when each party contributes what it has at its disposal and the results of such is to share it between the parties. So this is the predominant tendency in relations between the ISS Partners.

Thank you.

The CHAIRMAN: I give the floor to the distinguished representative of Italy for your question.

Ms. N. BINI (Italy): Thank you Mr. Chairman and, of course, my delegation would like to thank very much the representatives from the five partners of the International Space Station programme for their excellent and substantive presentation.

Italy is one of the European 11 Partner States that have signed the Intergovernmental Agreement, as Mr. André Farand has described before.

Italy needed a law to authorize the President of the Republic to ratify the Agreement and to include the provision of the international Intergovernmental Agreement in our national law system.

Coming to the questions very briefly. Since the subject of international property rights has been touched upon, my question is, is there any information about demand of a patent presented or other kind of intellectual property rights to be registered available to experiments carried out in the International Space Station?

Thank you.

Ms. R. J. FRANK (NASA): You are seeing us shake our heads. To the best of our knowledge, while a number of companies are developing, hopefully pharmaceutical and other products, they have not yet reached this stage of applying for patents.

The CHAIRMAN: I see the distinguished representative of the United Kingdom.

Mr. S. MOSTESHAR (United Kingdom of Great Britain and Northern Ireland): Thank you Mr. Chairman and I might say that the United Kingdom delegation would like to associate itself with the other delegations who have complimented the presenters for an excellent presentation on the IGA and the International Space Station.

Our question is somewhat related to the question put by the delegation from Austria and just an expansion if we could ask for from the representative of ESA is when, and we appreciate that each of the agencies go through their own process in selecting experiments that might be put forward in the plan for the five-year experimental plans that they develop, but I wondered whether in the case of ESA the "jurateur(?)" principles play a part in making that selection.

Mr. A. FARAND (ESA): I would say that "jurateur" which is the rule in ESA whereby a State contributing to different optional programmes have expectations that contracts related to this programme will come back to their industry or their research institutes is not a primary criteria for that ELIPSE programme I was talking about. It is really selected on the quality of the proposal receiving the different fields

of scientific activities to be conducted on board the Station.

Now, behind the funding of ELIPSE by participating States, there is an analysis of what are the capacity of the various institutes in the various countries. So you would expect a country like Germany would have an idea of the scope of activities that can be conducted in the Space Station and would put a funding in ELIPSE which is commensurate with that capacity. So the return, although not taken as a primary, let us say, criteria for selecting experiments, at the end, it is when you look at the statistics, the statistics are fairly good in terms of “jusrateur(?)” because of the capacity and the analysis done before the funding in ELIPSE.

The CHAIRMAN: Distinguished delegates, given the available time we still have five minutes and again are there any questions delegates have for the presenters?

In the absence of which I should, on your behalf, and in my capacity as Chair, thank the presenters for an excellent presentation and a robust interaction with delegates.

Distinguished delegates, I will now shortly adjourn this meeting of the Subcommittee.

Before doing so, I would like to inform delegates of our schedule of work for this afternoon.

We will meet promptly at 3.00 p.m. At that time we will continue and conclude our consideration of agenda items 10, Capacity-Building in Space Law, and 12, Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space.

We will continue our consideration of agenda item 13, Proposals to the Committee on New Items for Consideration by the Subcommittee.

Are there any questions or comments to this proposed schedule?

I see none.

The meeting is adjourned until 3.00 p.m.

The meeting adjourned at