

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

Unedited transcript

792nd Meeting
Friday, 27 March 2009, 3 p.m.
Vienna

Chairman: *Mr. V. Kopal (Czech Republic)*

The meeting was called to order at 3.10 p.m.

The CHAIRMAN. Good afternoon distinguished delegates, I now declare open the 792nd meeting of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space.

Distinguished delegates, I would first like to inform you of our programme of work for this afternoon. We will continue our consideration of agenda item 8, draft protocol on matters specific to space assets and continue with our consideration of agenda item 9, capacity-building in space law. We will also begin our consideration of agenda item 10, national mechanisms relating to space debris mitigation measures and will also begin our consideration of agenda item 11, national legislation relevant to the peaceful exploration and use of outer space.

Are there any questions or comments on this proposed schedule?

I see none.

Distinguished delegates before we consider our agenda items for this afternoon, I would like to inform you that I have a request from a delegation to make a statement under agenda item 3, general exchange of views. With your permission I would like to invite the distinguished delegate of Saudi Arabia to make a statement. Saudi Arabia has the floor.

Mr. M. TARABZOUNI (Saudi Arabia) (*interpretation from Arabic*) Sir, I have the pleasure, on behalf of Saudi Arabia, to see you chairing this meeting. I support all the effort which you have put in

to this meeting, along with those in your team who are working alongside you and I am confident that, thanks to your experience and your wise guidance, we are going, if God wills it, to be able to achieve all the results for which we hope. Speaking here, I would like to state that my country is willing to cooperate fully with you in this work. I would also like to use this opportunity to thank Ms. Mazlan Othman and also all the members of the Secretariat in the Office for all the work which they have put in to this enterprise, preparing our meetings and so on and I wish them all success.

Mr. Chairman, I would like to start by saying that Saudi Arabia has approved the treaty which is managing States' activities as they explore outer space and also the Convention on International Liability for Damage Caused by Space Objects. At the present moment we are studying the other three treaties, which have not yet been ratified, in the hope of ratifying them in the near future. Ongoing development in countries activities in the exploration and use of outer space, including the Moon and other celestial bodies, means that States are committed to avoid placing nuclear weapons or objects or other weapons of mass destruction into orbit and I would ask all States and particularly the developed countries who are indeed engaging in activity on the Moon and other celestial bodies. I would ask them to sign and ratify, as soon as possible, the treaties which govern their activities on the Moon and on other celestial bodies in order to give an example to other countries and encourage them to sign and ratify these treaties. Saudi Arabia has registered all 12 satellites which have been launched between 2005 and 2008, the so-called international rules. We have sent all the relevant information to the Office for Outer Space, here in Vienna.

In its resolution 50/27 of 6 December 1995, the General Assembly endorsed the recommendation of the Committee on the Peaceful Uses of Outer Space that, beginning with its thirty-ninth session, the Committee would be provided with unedited transcripts in lieu of verbatim records. This record contains the texts of speeches delivered in English and interpretations of speeches delivered in the other languages as transcribed from taped recordings. The transcripts have not been edited or revised.

Corrections should be submitted to original speeches only. They should be incorporated in a copy of the record and be sent under the signature of a member of the delegation concerned, within one week of the date of publication, to the Chief, Conference Management Service, Room D0771, United Nations Office at Vienna, P.O. Box 500, A-1400, Vienna, Austria. Corrections will be issued in a consolidated corrigendum.



As far as space law is concerned, we have been in contact with the Ministry of Higher Education and we have requested that the Ministry should pay particular attention to this subject and that it should teach space law in the 19 law faculties that exist in Saudi Arabia and that they should also send students to the regional and worldwide specialized faculties, who specialize in space law. We also requested that they hold conferences and that they establish the necessary logistics for providing this type of information.

Mr. Chairman, the delegation of my country would request this Committee to pursue the business of defining and delimiting outer space. It is necessary for us to have regard for the safety and security of outer space and to keep them free of arms and weapons.

As far as geostationary matters are concerned which basically are a strategic resource, it is to the strategic aspect that their importance is restricted. There is a danger that we have saturated this orbit and, given that that is so, we consider that this particular orbit should be used in a sensible way without segregating countries into different categories whatever their technological potential might be. This needs to be done for us to be able to benefit from the geostationary orbit and to do this in a fair and just way, bearing in mind the needs of developing countries.

My country's delegation would invite other countries to follow a balance between the commercial use of this orbit, that is on the one hand, and geostationary satellites for Intelsat, Inmarsat, Intersputnik, and other international organizations. Companies have been set up, managed by certain countries, private companies which are being managed by certain countries and there is also a series of links between these commercial systems of satellites. Initially as governmental systems they were one thing but they have now changed into something else and for this reason the Committee on the Peaceful Uses of Outer Space, working together with ITU which is an observer in this Committee, should put forward proposals which would allow the developing countries to benefit from existing resources in a fair way. ITU is having a conference in Geneva in 2011 and, it is during that conference, that this proposal should be put forward. Such a proposal is perfectly compatible with ITU's terms of reference. The geostationary orbit should be used for purely and solely peaceful ends.

Mr. Chairman, as far as space debris is concerned, we should pay more attention to this issue particularly given the accident which happened in February 2008 when two satellites clashed. There has also been the destruction of certain satellites by rockets

fired from the surface of the Earth. We would encourage and support all the studies which have been made by Canada in this field along with those which have also been performed by Germany and we hope to cooperate with all these countries on this subject.

Mr. Chairman, the delegation of my country has been listening very closely to all that has been said by previous speakers. We thank them all for their statements and we thank all the delegations here today and we wish them all, all success in their work. Thank you Sir.

The CHAIRMAN Thank you very much distinguished representative of Saudi Arabia for your statement on agenda item 3, general exchange of views. You mentioned in the beginning and brought good news on the ratification of the Outer Space Treaty and of the Liability Convention by your country and we also took note that you are still studying the other treaties for future signature and ratification. You then made an appeal to other countries which have not done so yet to ratify the United Nations space treaties. You also registered the 12 satellites in the recent period, all 12 satellites that were launched by your country in the recent period and sent all the relevant information to the United Nations Secretary-General and of course, through him, to the Office for Outer Space Affairs. You then took position in relation to several issues that are here under discussion particularly you elaborated in great detail on the issue of the geostationary orbit. You mentioned also that this orbit should be used exclusively for peaceful purposes and that a balance should be preserved between different users of this valuable part of outer space. You also suggested that COPUOS with ITU should put forward proposals in order that all countries could benefit these resources in a proper way with due regard to the interests of the developing countries. You also mentioned the issue of space debris.

I would like to thank you also for the kind words you addressed to the Director of the Office for Outer Space and all members of this Office and also to the Chair. Thank you very much once again for your statement.

Ladies and gentlemen, I do not have any speaker inscribed on the item of general exchange of views and therefore we will now turn to agenda item 8, draft protocol on matters specific to space assets.

I do not have here any delegation inscribed in the list of speakers and neither do I have an application from the part of observers on this particular item.

Is there any delegation or observer wishing to speak on this agenda item? We will of course continue the discussion on this item, the coming Monday.

Unless any other delegation wishes to speak on this issue at this meeting of our Subcommittee we will proceed further.

We now pass to agenda item 9, capacity-building in space law. Here I have three speakers that applied for the discussion on this item. The first one among them is the distinguished representative of the United States of America.

Sorry, I apologize, I overlooked that the first speaker on my list is the distinguished representative of Nigeria because it is written in different colours here and the name of Nigeria is black and the other three applicants have been written with a red pen and therefore my attention was drawn to the red pen. I apologize to the representative of the United States and give the floor first to the distinguished representative of Nigeria.

Mr. A. OTEPOLA (Nigeria) Thank you Mr. Chairman. Nigeria appreciates the work of the Subcommittee especially the role it is playing in the development of international law and ensuring the peaceful uses of outer space. It is a recognition of the need for a universal understanding of legal issues relating to the use of outer space that the Subcommittee, at its forty-seventh session in 2008, addressed for the first time capacity-building in space law as a single issue on its agenda. This is an attestation to the need for a thorough understanding of the legal implications of our activities in outer space by all member States.

At its fifty-first session in 2008, the Committee on the Peaceful Uses of Outer Space mandated this Subcommittee to explore the possibility of developing a curriculum for a basic course in space law that could be used in particular for the benefit of developing countries by initiating space law studies, as appropriate, in the activities of the regional centres for space science and technology education affiliated to the United Nations. We appreciate the work of the Office of Outer Space Affairs in leading the efforts to implement the decisions of COPUOS in this regard. The preliminary draft education curriculum on space law, presented in A/AC.105/C.2/2009/CRP.5 by the expert group, is a good step forward in addressing this subject and my delegation commends the effort of the members of the expert group.

The task before this Subcommittee is to translate our wishes into action by encouraging and empowering appropriate agencies and entities, including member States and intergovernmental organizations, to support this effort and spread knowledge and capacity in space law.

Mr. Chairman, during the forty-seventh session of this Subcommittee in 2008 when the Director of OOSA addressed this subject, the regional centres for space science and technology education affiliated to the United Nations were identified as a possible location for basic space law education for developing countries. From the reports and observations of member States on these centres there is, currently, a clear lack of adequate support for the activities in terms of material resources and if they will be truly used as a viable centre for capacity-building in space law then there is a need to reinvigorate and empower these centres to take on this new challenge. However, while this support is commendable and desirable especially for young professionals to pursue further education in space law, it is equally imperative to have a deliberate policy of creating centres of excellence where experts in space law, especially from developing countries, could be trained to take on this serious challenge of issues with legal implications in outer space. Dealing with and understanding of, legal issues relating to specific subjects, such as space debris, liability to damage caused by space objects, use of nuclear power sources in space, etc. we require more than a basic understanding of space law. For this purpose, recommendations such as the establishment of a fellowship programme or training opportunities with organizations and institutions working in such space-related areas should be favourably considered for adoption and implementation.

At the national level we are planning to engage our universities to introduce air and space law modules in their international law courses. This will equip our young professionals who look forward to a career in space law and also provide the professors the opportunity to direct attention to more research work in space law.

We appreciate the constraints that the Office of Outer Space Affairs will face in implementing the decisions and conclusions of this Subcommittee in the light of a 2 per cent across-the-board cut in the budget of all UN bodies and agencies by 2010 but we urge the Office to find new and innovative ways of ensuring that this programme does not suffer premature death. This is the time to deepen and strengthen capacity in space law particularly in developing countries for a

thorough appreciation by all of the legal implications of our activities in outer space.

Nigeria also requests that this item remains on the agenda of the Subcommittee until such a time that its objectives are achieved. Thank you Mr. Chairman.

The CHAIRMAN Thank you distinguished representative of Nigeria for your statement on agenda item 9, capacity-building in space law. You appreciated that COPUOS mandated this Subcommittee to explore this item particularly the possibility of developing a curriculum for a basic course in space law that could be used for the benefit of developing countries by initiating space law studies as appropriate. You also spoke on the regional centres that could and should play an important role in this endeavour. However, you also brought to our attention that in order to translate our wishes into action much has still to be done in this respect. You then were speaking about the subject of the work of regional centres for space science and technology education affiliated to the United Nations as a possible location of basic space law education for developing countries. However, you warned that there is currently a lack of adequate support for their activities in terms of material resources. You then mentioned to us that, at the national level, Nigeria was planning to engage its universities to introduce air and space law modules in their international law courses. Finally, you made an appeal that, in the light of financial constraints of the United Nations, the Office should attempt to find new and innovative ways of ensuring that this programme does not suffer a premature death. Finally, you made a proposal that this term remain on the agenda of the Subcommittee until such time that its objectives are achieved. Thank you very much for your statement, distinguished representative of Nigeria.

Now I give the floor to the distinguished representative of the United States.

Mr. S. McDONALD (United States of America) Thank you Mr. Chairman. It is a pleasure to discuss capacity-building efforts in the area of space law. First, I would like to thank OOSA for their update of the OOSA directory of educational opportunities, I think this is very important in letting people know where they can go to learn about space law and to build capacity and especially because it is on the web and it is available to more and more people. We would like to thank you for that.

We would also like to take the opportunity to commend the completion of the draft education curriculum and particularly thank those experts who

donated their time, energy and knowledge, to this very important effort as we work to build capacity in space law across the world.

I would also like to report on formal space law education in the United States. Several US law schools teach space law and almost 10 per cent have dedicated space law classes. There are two programmes in the United States dedicated to space law, the National Center for Remote Sensing, Air and Space Law at the University of Mississippi School of Law serves an important purpose and contributes to the remote sensing and space industry by addressing and conducting research, education and outreach activities related to the legal aspects of applying remote sensing, air and space technologies to human activities. The Center offers a wide range of courses on air, space and remote sensing law. It also publishes the world's oldest and most important journal on the topic, the Journal of Space Law, and it awarded the first certificate in remote sensing, air and space law in the United States.

Another programme in the United States, the University of Nebraska College of Law's Space and Telecommunications Law, Master of Laws, combines space law with telecommunications law rather than the traditional combination of space and air law. In addition to the LL.M. degree, the University of Nebraska Law School offers a master of legal studies in space and telecom law for non-lawyers and a traditional J.D. degree with specialization in space and telecommunications law.

Further, other graduate programmes are beginning to add space law courses to their course catalogues. For example, Webster University now offers a space law and policy course and a space systems acquisition law course as part of its M.S. in space systems operation management.

Second, short space law workshops are offered by professional organizations, including the American Institute of Aeronautics and Astronautics, the National Space Society, the American Astronautical Society and the Space Foundation. In addition, the American Bar Association hosts a forum on space law, two times a year, which is available for continuing legal education credit. There are also law student's space law writing competitions and a space law moot court programme where students argue cases in simulated international court hearings.

Regarding capacity-building for developing countries, US government officials and law professors have had the pleasure of participating in capacity-building workshops sponsored by the United Nations

Office for Outer Space Affairs. We think that these efforts, as well as other UNOOSA efforts, have been valuable contributions to capacity-building in the area of space law and we echo Nigeria's hope that the current budget cuts do not affect them too much.

In our view the agenda item on national space legislation is an example of how this Subcommittee can itself contribute to capacity-building. Countries with effective legal regimes in the space law area can provide other countries with concrete examples of space-related legislation which may enable those other countries to build their capacity in this area. Thank you Mr. Chairman.

The CHAIRMAN Thank you distinguished representative of the United States of America for your statement on agenda item 9, capacity-building in space law. You reported on formal space law education in the United States of America by mentioning two programmes dedicated in the United States to space law, namely, the National Center for Remote Sensing, Air and Space Law at the University of Mississippi School of Law and then also the programme of the University of Nebraska College of Law's Space and Telecommunications Law, Master of Laws, which combines space law with telecommunications law rather than a traditional combination of space and air law, this is, of course, very interesting. Further, other graduate programmes are also beginning to add space law courses to their course catalogue. Second, you mentioned that short space law workshops are offered by professional organizations in the United States and you enumerated all these organizations. Regarding capacity-building of developing countries you informed us that the US government officials and law professors have had the pleasure to participate in capacity-building workshops. We also witnessed the participation of the US specialists ____ (?) and other specialists in the workshops of the United Nations on space law. You finally drew our attention that, in your view, the agenda item on national space legislation is an example of how this Subcommittee can itself contribute to capacity-building.

Thank you very much for your contribution distinguished representative of the United States and now I give the floor to the distinguished representative of South Africa.

Ms. L. JOYCE (South Africa) Thank you Mr. Chairman. The Subcommittee will recall that South Africa had proposed agenda item 9 on capacity-building in space law following a very useful symposium on capacity-building in space law that was jointly presented by ECSL and IISL at the Legal

Subcommittee in 2007. One of the reasons that prompted the South African delegation to propose the item was because there was no mention, during the symposium, of any programmes on capacity-building in space law in Africa. After the deliberations on the item during last year's Subcommittee meeting, the Subcommittee agreed to retain their agenda item, which is a single issue item, on this year's agenda. This followed an overwhelming agreement amongst delegations but in particular delegations from developing countries that there is an urgent need to promote and strengthen cooperation with and assistance to developing countries in the area of space law.

Mr. Chair, we are very pleased with the progress made in respect to the initiative of OOSA by organizing a meeting of experts to develop a curriculum in space law. We are looking forward to receiving the final draft which, we believe, will be referred to delegations for their comments. We wish to reiterate our call that this initiative should not only be restricted to the regional centres but that it should be developed and expanded to include a freely available general course in space law.

Mr. Chair, from our side the South African Space Council has established an advocacy committee that has commenced with discussions with South African law faculties to include a brief introductory course on air and space law in their general public international law courses. We hope to report on developments in this regard in future.

At the same time, the Department of Trade and Industry, as the lead department in the area of space, has organized a seminar recently in cooperation with the law faculties of the universities of Limpopo and Venda during which the focus was on the promotion of space and air law as well as providing information on career opportunities in this field. We hope to continue with this initiative at other law faculties as well.

During the statement by the Director of OOSA on the operations of the Office, Dr. Othman informed the Subcommittee that the Office will not be in a position to implement the full breadth of its activities due to a budget cut to take effect at the beginning of 2010. This is the result of all UN offices having been requested to cut their overall regular budgetary resources by 2 per cent. In particular the Director mentioned that the Office's activities related to capacity-building in space law will feel the impact of the expected budgetary cut. Needless to say, Mr. Chairman, for our delegation but also for other developing countries' delegations, this news is most

disappointing. This would mean that one of the main issues, namely, capacity-building in space law, identified by UNISPACE III as an important part of a strategy to address global challenges in the area of space, would be neglected. Following up on the recommendations of UNISPACE III a workshop on capacity-building in space law was held in The Hague in 2002 and several recommendations were made, I am mentioning a couple.

As States implement their obligations under the main international space law treaties through national law, OOSA should develop basic elements that could be included in national space legislation and licensing regimes. With regard to education in space law this could be approached on at two levels, namely, including both university programmes and curricula for students and educators and short courses designed for professionals and decision-makers. Short-term programmes, workshops and regular training courses should be held in specific States and regions in order to build capacity in space law. To create space law databases that include information on institutions that provide courses in space law. Finally, that a short lecture series on principles of space law aimed at professionals and students be developed by the International Institute of Space Law, IISL, and that this be disseminated on a priority basis by OOSA via videotape, the Internet and other media.

Mr. Chairman, some of these recommendations have been implemented but there is no doubt that they should be supported in order to be continued and further strengthened. For example, OOSA does have a database on institutions that provide courses in space law. We have, in fact, been provided with an updated version in support of our discussions on capacity-building in space law. However, few of the law faculties or institutions mentioned in the database offer scholarships or fellowships. Also, it is not clear whether the existing list of fellowships and scholarships are aimed particularly at students from developing countries. We believe that OOSA could do more to encourage institutions and organizations from developed countries to provide scholarships to students from developing countries in order to strengthen space law in line with the recommendations of UNISPACE III.

Mr. Chair, another of the recommendations that has not seen fruition is a proposal that IISL develop a short lecture series on space law that can be disseminated for distance learning purposes. Distance learning is one of the most effective ways of disseminating information especially in developing countries and its advantages should be exploited.

Other international organizations have used this method with great effect such as the World Organization on Intellectual Property which has numerous basic and advanced Internet courses on intellectual property law that are either free of charge or for a minimal cost. This is certainly an avenue that OOSA, in cooperation with IISL, could explore. Referring back to OOSA's updated database on space law courses, OOSA may wish to consider in particular the MIT Open CourseWare offered by the Massachusetts Institute of Technology as a basis for an online free of charge course in space law.

Mr. Chair, on a proposal by the workshop in The Hague, held in 2002, that regional workshops on space law should be held, OOSA has, to date, held four such workshops, in Korea in 2003, in Brazil in 2004, in Nigeria in 2005 and Ukraine in 2006. A workshop that was supposed to be held in Thailand last year has been postponed to this year.

Mr. Chair, during the Nigerian workshop on space law in 2005 it was agreed that the challenges to harness skills and educational opportunities in developing countries could be addressed by making use of online resources and video conferencing as a means of supplementing educational resources. OOSA was encouraged to develop a baseline course on space law and also to identify fellowship opportunities specifically for students from developing countries to undertake studies in space law. During the first and second African Leadership Conference on Space Science and Technology for Sustainable Development that was held in Nigeria in 2005 and South Africa in 2007 respectively, the need for capacity-building in space science and technology generally and in space law specifically is a vein that threads through every consideration of a topic of space.

Mr. Chair, during the valuable symposium on capacity-building in space law that was jointly presented by ECSL and IISL at the Subcommittee in 2007, one of the participants, Dr. Lafferrandier, made the point that the volume of documentation on space law has become enormous, correspondingly hard to access and costly for all concerned. Here again a recommendation is made regarding utilizing information technology revolution for capacity-building and, in this regard, the speaker proposes dedicated space law databases and also web type electronic resources for researchers everywhere. He proposes making use of multilingual CDROMS that could be distributed, creating model format courses and other educational resources for distribution via the Internet amongst various law faculties. At the same symposium, Professor Hobe focused on a different but

equally important aspect of capacity-building namely networking. He mentioned the experiences of some institutions such as the European Centre for Space Law, that organizes an annual one-day practitioners forum to provide professionals in space sector with a forum to exchange views, knowledge and information and focus on the latest issues within the European context. This forum, in cooperation with OOSA, could consider perhaps whether it is viable to establish a similar forum in partnership with Africa, perhaps under the auspices of the African Leadership Conference on Space Science and Technology.

Mr. Chair, the challenges of building and retaining capacity in space law are numerous and, if faced alone, can seem almost insurmountable however, there is no doubt that, in a globalized world where cooperation is essential, partnerships in space law and space law capacity-building can greatly assist developing countries to meet these challenges. An excellent opportunity to establish such a partnership is for OOSA to consider participating in the chapter of capacity-building in space law that will be held during the third African Leadership Conference that will be taking place in Algeria in November this year. During a meeting with OOSA and some members of the ALC steering committee in February this year, OOSA offered to support the ALC. In view of the urgent need to build capacity in the area of space law, it might be an opportune time to utilize the forthcoming ALC to start a new partnership between OOSA and Africa.

Mr. Chair, at the same time, developed countries cannot afford to lose this opportunity to assisting developing countries in this area. There is no doubt that all actors in space would want newcomers in the area of space exploration and use to be responsible and committed partners. Developing countries will increasingly become more active in space. The ever new developments in space demand from all of us a renewed commitment that more should be done to protect space and its uses through a ruled space and a regulated environment. This matter deserves our sincere attention. In fact, this is too important to focus a budget cut on capacity-building in space law. Now is the time to take the many recommendations that have been made over the years, including by OOSA-sponsored workshops on space law, and to make it a reality and ____(?).

Finally, Mr. Chair, in view of the ongoing developments of the curriculum in space law, the various suggestions made by delegations on this matter and also the stated link between this item and item 11, general exchange of information on national legislation relevant to the peaceful exploration and use of outer

space, our delegation would suggest that the item on capacity-building in space law be retained again on the agenda for consideration of next year's Legal Subcommittee.

In order to give practical effect to some of the recommendations that have until now been made to strengthen capacity-building in space law, we request that OOSA consider preparing a conference room paper, for our consideration next year, that would summarize all these recommendations, provide an update of their realization and also to provide suggestions to give practical effect to the recommendations. Thank you.

The CHAIRMAN Thank you very much distinguished representative of South Africa for your valuable contribution to the discussion on agenda item, capacity-building in space law. Your statement was very rich and touched many issues and aspects of this particular item indeed and it would be very difficult to make a full abstract of the main ideas included in it. However, I would like to say that you made an urgent appeal to promote and strengthen cooperation with, and assistance to, developing countries, in the area of space law. You also summarized the efforts that have been developed by your government in your own country and brought some examples of these efforts. You then turned our attention to the fact that the United Nations budget, including the budget of the Office for Outer Space Affairs, has been reduced and that this news was most disappointing for your country and probably also for other developing countries. You then recalled the first workshop that was held on capacity-building in space law in The Hague in 2002 and recalled, in particular, several recommendations that were made there. You offered us a certain evaluation whether all these endeavours have been fulfilled or not yet completely. Some of the recommendations you said have been implemented but there is no doubt that they should be supported in order to be continued and further strengthened. You then mentioned the proposal that was developed by IISL, International Institute of Space Law, to prepare a short lecture series on space law that can be disseminated for distance learning purposes. Then you recalled the other United Nations workshops that followed after The Hague workshop and brought to our attention that the workshop that was supposed to be held in Thailand last year has been postponed to this year. This was of course due to the development in Thailand and therefore it was irreversible for the Outer Space Office. You continued mentioning the fact that were done during the first and second African Leadership Conference on Space, the second one was held in South Africa, of course, and you finally drew our attention to some specific

proposals made during the symposia, that were held jointly by IISL and ECSL, in particular the idea of Dr. Lafferranderie and of Professor Hobe. A very interesting idea that you raised was that concerning the establishing of a partnership for OOSA to consider participating in the chapter on capacity-building in space law that will be held during the third African Leadership Conference that should take place in Algeria in November this year. Finally, you suggested that the item on capacity-building in space law be retained again on the agenda for consideration of the next year's Legal Subcommittee. You also submitted a proposal that OOSA should consider preparing a conference paper for our consideration next year that would summarize the recommendations made, provide an update on their realization and also to provide suggestions to give practical effect to the recommendations. I apologize if I omitted something but this seemed to me the highlights of your meaningful statement. Thank you very much.

I now give the floor to the distinguished representative of Germany.

Mr. I. NIEMANN (Germany) Thank you Mr. Chairman. Germany recognizes the implications of the calls for efforts at capacity-building in space law and attaches great importance to this issue. Germany has one of the world's leading institutions for teaching and research in international space law, namely, the Institute of Air and Space Law of the University of Cologne which has been mentioned in the directory distributed by the Secretariat, the day before yesterday, as Conference Room Paper 4.

Education opportunities serve little if they cannot be afforded. The German delegation would therefore like to take this opportunity to point to a number of publicly-funded scholarship opportunities in Germany that may also serve to support education and research in the area of space law. The German Federal Foreign Office and the Federal Ministry of Economic Cooperation and Development fund academic exchange with foreign countries through their scholarship institutions, German Academic Exchange Service, DAAD, and the Alexander von Humboldt Foundation.

The scholarship programmes of the German Academic Exchange Service include, inter alia, annual scholarships for students and graduates of all areas of study, funding of participation in university summer courses, research _____(?) for academics as well as study trips and student internships. A part of the funding dedicated to the German Academic Exchange Service is particularly earmarked for the promotion of

education and cooperation with developing countries. In 2007, the German Academic Exchange Service funded, in total, 35,000 students and academics from foreign countries of which more than 30,000 came from developing and newly industrializing countries.

The Alexander von Humboldt Foundation enables highly qualified foreign academics a sojourn in Germany and promotes the continuation of professional ties established during that time. Five hundred and fifty Humboldt research scholarships are granted to young academics every year. A special scholarship programme of the Foundation, the Georg Forster scholarship programme, is especially dedicated to academics from developing and newly industrializing countries. The scholarship opportunities mentioned are, in principle, open to all areas of study and research and can thus also be utilized for the promotion of capacity-building in space law. Potential applicants are invited to turn to the Germany Embassy in their respective country which would be glad to provide further details and guidance.

Mr. Chairman, I would also like to present some information the German delegation has received from the Institute of Air and Space Law of the University of Cologne which may be found useful by delegates of the Legal Subcommittee. In order to further the status and application of the five United Nations treaties on outer space, the Cologne Institute provides a collection called 'Space Law: Basic Legal Documents' since 1989, which is edited by Professor Karl-Heinz Böckstiegel, Dr. Marietta Benkö and Professor Stephan Hobe. This publication is a loose-leaf collection consisting of five volumes with approximately 4,500 pages. It is an essential reference and research tool for those involved in the formulation, implementation and operation of space law and policy. Its loose-leaf format ensures that the material is kept fully up-to-date, as pointed out in the statement of the Director of the United Nations Office for Outer Space Affairs. In her statement made in the Legal Subcommittee on Monday, instalment 13 was published in October 2008 and instalment 14 is planned to be published this summer. Students, libraries and universities from developing countries, can purchase the collection and especially favourable conditions directly from the publisher. In addition to the hard copy version, a database version of the 'Space Law: Basic Legal Documents' has also been available since 2006.

In order to facilitate the work of the Legal Subcommittee in 2009, free access to the database can be granted to all delegations of the Legal Subcommittee as well as to the United Nations Office for Outer Space Affairs. Please refer, for this purpose,

to the papers made available at the Information Desk at the entrance of the conference room which contain login information and a password. More copies can be obtained through the German delegation.

The Institute has cooperated with the United Nations Office for Outer Space Affairs since 2003 especially with respect to the collection and evaluation of international and national space legislation. In this cooperation the Institute relies on its resources acquired over many years, assembled in the above-mentioned loose-leaf collection and the database which will be connected with it.

Furthermore, the Institute of Air and Space Law at the Cologne University and the German Aerospace Centre, DLR, have initiated a common project aimed at developing a topical commentary on the Outer Space Treaty and the United Nations space law treaties. This commentary will be edited by the Institute's Director, Professor Stephan Hobe, in cooperation with Professor Dr. Schrogl and Dr. Schmidt-Tedd, and will involve the participation of international experts on these subjects. The publication will comprise three volumes which will be published between 2009 and 2011 successively. These activities will spread the knowledge of space law more extensively and will give occasion to deal with the open questions of interpretation in an intensive way. As a result this may lead to a better and more homogenous understanding of space law. It is expected that it will be a valuable contribution to capacity-building in space law. For further information on these publications as well as about current activities of the Cologne Institute, please refer to the annual report of the Institute entitled 'Survey of activities 2008' which has been made available on the information table at the entrance of the conference room. Thank you Mr. Chairman.

The CHAIRMAN Thank you very much distinguished representative of the Federal Republic of Germany for your statement on item 9, capacity-building in space law. You brought to our attention many endeavours of your country and German institutions which are busy in the field of space law to the development of such a capacity-building in this particular field and of international cooperation in this particular field. Impressive is the number of the opportunities that your country has offered to foreign students from among them the majority coming from developing and newly industrialized countries. You brought also to our attention a wide volume of activities of the Institute of Air and Space Law of the University of Cologne and particularly the collection of space law basic legal documents which have been published since 1989 and now has reached 4,500 pages

in five volumes of this collection. In order to facilitate the work of the Legal Subcommittee, you extended an offer of free access to the database that can be granted to all delegations of the Legal Subcommittee as well as to the United Nations Office for Outer Space. Furthermore, the Institute of Air and Space Law at the Cologne University and the German Aerospace Centre have initiated a great common project aimed at developing a topical commentary on the Outer Space Treaty and the other UN space law treaties. I think this is very important information and I thank you very much for your delegation for it.

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

Mr. D. SAISHO (Japan) Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, on behalf of the Japanese Government I am pleased to address the forty-eighth session of the Legal Subcommittee of COPUOS. I will report on Japan's efforts related to capacity-building in space law.

Mr. Chairman, needless to say continuous training and capacity-building are fundamental for advancing the study of space law. The Japan Aerospace Exploration Agency, JAXA, is taking action relating to the education in space law. JAXA greatly encourages students in the Asia-Pacific region to participate in the Manfred Lachs Space Law Moot Court, which is organized by the International Institute of Space Law. Since 2001, JAXA has supported the winning teams of the Asia-Pacific regional rounds by providing travel fares to the world finals held at the International Aeronautical Conference. We know that many students in the Asia-Pacific region are interested in studying space law due to the high volume of participation at the regional level of the moot court every year. Last year, 39 teams from 6 countries in this region participated. The Manfred Lachs Space Law Moot Court provides valuable opportunities for students interested in the study of space law to raise their interest, interact with each other, and gain practical experience in the application of space law. Japan is determined to continuously contribute to space law education and it is our hope that JAXA's sponsorship will help young students in the Asia-Pacific region to exchange a wealth of knowledge, broaden their views and extend their capabilities in order to advance the study of space law in the future.

Mr. Chairman, at the Space Education and Awareness Working Group of the 13th session of APRSAF, the Asia-Pacific Regional Space Agency Forum, held in Jakarta in 2006, it was recognized that it is important to provide educational materials on

space law as well as space science and technology particularly for developing countries. Through this working group we have been distributing educational materials in the field of space science and technology, we would be happy to continue similar work in this area of space law whenever relevant materials are made available by members of working group for wider distribution. For instance, since the education opportunities in the space law directory made by OOSA and revised last year is an important source of information, we have been interested in distributing it to the developing countries, through the framework of APRSAF Space Education and Awareness Working Group. Also, the meeting of experts related to space law education, held in Vienna in December 2007, was a successful approach. We are interested in introducing this directory, in cooperation with OOSA, to the Asia-Pacific region through APRSAF scheme, once the curriculum has been created.

Furthermore, since the end of last year, JAXA has created a website open to the public which contains information on international space treaties as well as national space laws of 17 countries, both in their original language and in Japanese as appropriate. The contents printed out is about this much. We believe that this will extend the opportunities to students interested in the study of space law. Thank you for your attention.

The CHAIRMAN Thank you distinguished representative of Japan for your contribution to the discussion on agenda item 9, capacity-building in space law. In this contribution you mentioned, for example, that the Japan Aerospace Exploration Agency, JAXA, is taking action relating to the education in space law. You then turned to the participation of students from the Asia-Pacific region in the Manfred Lachs Space Law Moot Court Competition which is organized by the International Institute of Space Law and in which, last year, 39 teams from 6 countries of the region participated. You also mentioned that Japan was determined to continue to contribute to space law education and JAXA would help young students in the region to exchange a wealth of knowledge and broaden their views. You also mentioned that the Space Education and Awareness Workshop of the 13th session of the Asia-Pacific Regional Space Agency Forum, that was held in Jakarta, recognized that it was important to provide educational materials on space law as well as space science and technology. Finally, you also brought to our attention that JAXA had created a website which contains information on international space treaties as well as the national space laws of several countries, both in the original language and in Japanese. Thank you very much for your contribution to this debate.

I now give the floor to the distinguished representative of Canada.

Mr. M. BOURBONNIERE (Canada)
Mr. Chairman, thank you very much. Canada is delighted to hear all about these wonderful and excellent initiatives and opportunities in capacity-building in space law. Canada has a long history in this field particularly with McGill University in the Institute of Air and Space Law which also now has a fully-funded Chair, the Tomlinson Chair, in air and space law governance. The Institute also produces a bilingual review on air and space law and offers numerous fellowships for the study of space law. McGill has also issued numerous LL.Ms and doctoral degrees in space law, many of them to foreign students. The Royal Military College of Canada also operates a distance learning course in space law and policy and this since 1995. Thank you very much Mr. Chairman.

The CHAIRMAN Thank you very much for your contribution distinguished representative of Canada in which you reminded us of the long history of interest of Canada in space law teaching and space law research. In particular you mentioned the long time activities of the Institute of Air and Space Law of the McGill University in Montreal. Thank you very much.

This was the last speaker on my list of speakers for this afternoon's meeting but is there any...

I recognize the distinguished ambassador of Chile.

Mr. R. GONZÁLEZ ANINAT (Chile)
(interpretation from Spanish) Thank you Sir. Mr. Chairman I will be very brief. I would like, if I may, to congratulate most warmly our Secretariat for all the work which they have carried out on this subject as well as on others because this is, after all, one of the main subjects which we are tackling today. Everything to do with this subject is all about further down the line, us being able to cope with all the other subjects which face us. We would like to have a very specific recommendation come out of this, which would be sent to the whole network of universities and there is such a network. So, we have been tabled a document, in this respect, it is true to say that the cost of what we are asking of the universities is very high but we need to find some way, here, in the United Nations, to make sure that we do have such a network. As I was proposing yesterday, we should be in touch with the people who would be organizing such courses. We could invite them here, we could have a special session for them as part of the General Assembly proceedings

to deal with issues of teaching and to make this aspect of teaching, teaching space law, a part of that.

My country is a part of our regional group and we are now setting up projects and establishing institutions but we do not have the basics that we need for that and by that I mean national jurisdiction, national legislation on which to build, so we need to bring it to the attention of a broader public in our countries. People tend to hear what we have to say and say, yes, yes, do not worry we have ratified all the conventions, all the treaties, we have participated in all the negotiations but, international law being part of domestic law, they say we do not need new domestic laws. I explain to them that that is an error, in fact I offer the same criticism that I offer here. Here I am talking about my country but I think there are many other countries in the same situation, we need to harmonize the legislation between those countries which have legislation specific to teaching space law and those which do not. For that we need to have very stringent conventions which would allow us to provide the capacity necessary to be able to do the work which is needed for all this to become fact.

So much is talked about climate change from the scientific point of view, so much is talked about food but so little is known about the legal instruments which are needed to tackle these shared problems and who is going to be contributing to establish that necessary legislation.

I would like to come on to the practical part of this issue. Unfortunately, Mr. Chairman, I am only able to stay until Monday and I would want to be here when we discuss the report. I would hope that in the report mention should be made of the fact that we have discussed this and the working group has a very specific proposal to make, that we set up a network of the centres mentioned here. That is not in the document but those who want to be part of that network should be able to be.

The United Nations University has done just that, there are resolutions on the basis of which they can act, maybe they do not actually discuss this specific issue but what the United Nations University has done is strengthen capacity and it does that capacity building, and I use the term in English, that is needed. By establishing this network we would be able to provide training and courses which would be targeted at developing countries and there are great advantages. One is that, in teaching and studies in general, people are flexible, they are not rigid in their attitudes and again I would like to congratulate our Secretariat for the high quality work which has gone

into this meeting and Ms. ____ (?) in particular who has made such a significant contribution to our work and we will be able to discuss this issue when the working group meets. I know that all this will be in good hands, in the hands of our distinguished professor from the University of Vienna whom I know now for many years. I know what a huge task it is to establish the guidelines to guide us in our work, all this is good but we need a recommendation and especially on food and this of course concerns the General Assembly.

Also I would ask my friend Niklas to speak on the subject of follow-up because it was not done as an isolated event it came about in the context of the Fourth Committee. I was thinking in terms of follow-up this year. I was going to say to the Secretariat that, in the context of deliberations of the General Assembly, this topic should be given the necessary prominence to make sure that it is one of the aspects that we will be discussing.

Finally, something that appears to have nothing to do with the topic but to bring you back to what I was saying a couple of days ago, I can resist anything excluding temptation and there is one temptation that I simply must give in to here and now. We have been working over many years, we have had very fruitful results, we have the legal instruments that are there, there is a real product that we control. So the Secretariat, over many years, has been putting in some excellent work, always, unfailingly, and yet we find ourselves in a situation where often we go to the General Assembly and, I think last time, they gave us 45 minutes for a presentation of our topics and perhaps they will cut us back to 15 minutes at the next General Assembly. It would appear that they are doing us a favour. I think we should make it clear to the President of the General Assembly and it should appear in the report and on record, I am saying that a letter should be sent to the President and please do it in this manner. I am going to read the report afterwards, not because I do not trust you but because I do not trust my own memory. I am certainly going to insist, I am going to be very difficult and tiresome, I am doing this in Chilean, I am saying that I will go to the length of looking into the report so a letter should go to the President of the General Assembly. This is absolutely necessary. There is a lack of respect shown to the delegations going to New York, to be there during the proper period of time and discuss topics as important as ours and this year even more so than our previous occasions because of the nature of the topic.

The CHAIRMAN Thank you very much distinguished representative of Chile for your contribution to our discussion in which you praised the

results of the Office for Outer Space Affairs in the support of the endeavours of the building of capacity in space law and in creating a certain network between the institutions that are engaged in this particular field. You also suggested to further organize such a network as one of the aims that should be in our minds. Finally you also brought our attention to the fact that the General Assembly, in its dealing with these matters, should perhaps dedicate more time and interest to this particular field.

Thank you very much distinguished ambassador for Chile and I now give the floor to ...

Mr. R. GONZÁLEZ ANINAT (Chile) (*interpretation from Spanish*) I do apologize Sir but there are two aspects that I should like to leave perfectly clear. I have not said devote more time, devote the appropriate time to this topic, the topic deserves more attention and my friend Ken Hodgkins and others who have gone to the General Assembly, if we get just one day out of two or three, it is not so much more time. We need four days, this is what the topic deserves, it is the lack of respect to give us less than that. So please, in an attitude of responsibility of course, unless anybody objects to this, I asked you respectfully to send an official letter that you, our Chairman, together with the Director of OOSA, should send to the Secretary-General or to the President of the General Assembly, either/or.

Thirdly, and you did not mention this, that in the context of the deliberations of the General Assembly there should be consideration of the possibility of bringing this topic onboard as part of the deliberations of the General Assembly.

Fourthly, the person responsible for this should be the Office of the United Nations in New York. I very much hope that this will be reflected in the report. I, in all humility, believe that these are important topics. I really respect you very much and the Secretariat as well and all of the delegates in attendance here. That is why I am mentioning this. They owe us this because of the significance of the topic, the respect they owe us for the work we have done and also attention for developing countries and access to knowledge and that is why I am putting in the request. So please could I ask the Secretariat to carefully note the four requests that I made because, in the plenary, I would otherwise have to repeat my request and I would have to draw your attention to any aspect that would be lacking. Thank you.

The CHAIRMAN Thank you very much distinguished ambassador of Chile. We will certainly

take note of your proposal and it will be duly reflected in the report and also realized in practice. It means that, if the Subcommittee agrees, it will indeed be sent to the Secretary-General or to the President of the General Assembly to inform him about this request and about the need to pay adequate attention to the issues in this field.

I now give the floor to the distinguished representative of Morocco.

Mr. S. RIFFI (Morocco) (*interpretation from French*) Thank you Mr. Chairman. Mr. Chairman in the context of agenda item 9, my delegation would like to share with you some of the comments we have on CRP.5, the draft education curriculum on space law. Sir, this document is of excellent quality and I would like to thank the Office but there is a little problem there.

My question is as follows. Is this basic programme intended for all countries including developing countries? Is this programme intended solely for specialized institutes and universities, or any body wishing to promote space law?

Mr. Chairman, as duly noted by my colleague from Kenya in Africa, and not just sub-Saharan Africa, we do not have a single institute specializing in space law. In other words, in Africa, experts in this area are impossible to find. With the basic programme on space law, how can we promote awareness of space law in these developing countries and particularly in Africa where there is no national legislation on the subject? What about regional centres? Do these centres take this programme totally on board in their curriculum? At this point in time, in the National Centre in Rabat, we devote just 10 hours to space law.

Mr. Chairman my delegation believes that this programme requires many resources and it is ill-adapted to the requirements of developing countries, in particular African countries, OOSA should be making more of a contribution along those lines.

Mr. Chairman, would it not be wise to have a streamlined basic programme, at least a basic course to be appended to CRP.5, where we would have a programme better adapted to the requirements of developing countries and the promotion of State law and to capacity development in the area of space activities. Thank you.

The CHAIRMAN (*interpretation from French*) I thank the distinguished representative of the Kingdom of Morocco. You have suggested that there

are several aspects that need to be attended to, I think the Secretariat is in the best possible position to reply. I call on the Secretary.

Mr. N. HEDMAN (Secretariat) Thank you Mr. Chairman. Just to explain how this work is being conducted from the Office's side together with a group of educators and the directors of the respective regional centres. I am not so sure that this is exactly clear in the draft curricula that delegations have before them. This is only a draft, there is a long way to go. There is now a need to balance the different modules, to look into this and to really see how such modules on space law could be realized into the existing curricula being taught already in the regional centres. The modules on space law that follow the already established four curricula for the regional centres being taught in space technology and science. The directors of all the regional centres are involved in this process including the regional centre in Morocco, so they are aware and it is very important for this project to have the inputs from the directors, from the respective regional centres because it is the regional centres that eventually will use this curricula. These are the only comments that I would like to offer at this time. Thank you Mr. Chairman.

The CHAIRMAN Thank you very much for providing answers to some question that had been raised in the intervention of our distinguished colleague from the Kingdom of Morocco.

(interpretation from French) Do these replies seem appropriate? Thank you for your cooperation distinguished representative of Morocco.

(continued in English) We have still the request from the distinguished representative of Saudi Arabia for the floor.

Mr. M. TARABZOUNI (Saudi Arabia) *(interpretation from Arabic)* Mr. Chairman, in view of the document we have in our hands and, after having listened to the colleagues who provided input for the discussions, I would like to say that there is no curriculum on space law nor can anybody teach this discipline in our regions. That is why we think it would be far better to create a centre where the subject is taught in Arabic, not in French, not in English, because we are 350 million individuals and I think we are entitled to learn everything on the subject of space and space law. That is why I ask our Secretariat to approach the States where Arabic is spoken, create a centre on space law and space sciences in Arabic.

Here I would like to add that, in Egypt, there is a university that delivers an MBA, a doctorate, and it is the Ain Shams University in Egypt, it is located in Cairo. Thank you.

The CHAIRMAN Thank you distinguished representative of Saudi Arabia for your contribution by which you suggested specially to create a centre on space law and sciences in Arabic because of the number of countries and of a high number of population speaking Arabic.

Are there any other contributions to our discussion on this particular topic?

I see none.

We will therefore continue our consideration of agenda item 9, capacity-building in space law, on Monday morning.

Distinguished delegates I would now like to begin our consideration of agenda item 10, national mechanisms relating to space debris mitigation measures. I have just one application for the discussion on this particular topic namely the distinguished delegation of the United States of America.

Mr. S. McDONALD (United States of America) Mr. Chairman, we are pleased that this Subcommittee is exchanging information regarding national mechanisms relating to space debris mitigation measures. The adoption of the Space Debris Mitigation Guidelines was a key step in providing helpful guidance to space-faring nations on this increasingly important issue and, much like our ongoing exchanges in this Subcommittee on national legislation, we think that this agenda item will help the members understand the different approaches that countries have taken regarding this subject.

The United States has long recognized the importance of managing the creation and effects of space debris and those US government agencies that participate in and license outer space activities have a robust framework of statutes, regulations and internal policies that take into account space debris mitigation from the design stage of a satellite to its end-of-life disposal.

NASA is the lead US government organization for orbital debris research and has maintained an orbital debris programme office at the Lyndon B. Johnson Space Center for the past 30 years. NASA's first internal policy for limiting the generation of orbital debris was issued in April 1993. Since then the

policy has evolved considerably in both breadth and depth.

In 1997, using the existing set of NASA orbital debris mitigation guidelines, the relevant agencies and departments of the US government drafted a set of orbital debris mitigation standard practices. These standard practices were briefed to industry and formally adopted in early 2001 and are specifically referenced in the current US national space policy signed by former President Bush in 2006. They also served as the basis for space debris mitigation guidelines developed and adopted by the Interagency Space Debris Coordination Committee in 2002 and the COPUOS Space Debris Mitigation Guideline document approved by the UN General Assembly in 2007.

NASA is a founding member of IADC and has played a leading role in discussions of space debris in IADC and in the Scientific and Technical Subcommittee of COPUOS since the topic became a standing agenda item in 1994. Given the genesis of the current international space debris mitigation standards, all NASA orbital debris mitigation policies and requirements as well as the US government orbital debris mitigation standard practices are consistent with the Space Debris Mitigation Guidelines of IADC and the UN.

NASA implements space debris mitigation measures through a series of agency policy directives, procedural requirements documents and implementation standards. These measures are applicable to all NASA programmes, each of which must develop a space debris mitigation plan that addresses all aspects of the mission, from hardware design to end-of-life disposal. Specific citations to these measures and links to where they can be accessed on the Internet can be found in the written version of this statement which we will make available.

The National Oceanic and Atmospheric Administration operates numerous meteorological and environmental satellites in the low-Earth orbit and geostationary orbit regimes. NOAA implements debris mitigation measures and end-of-life procedures similar to those implemented by NASA.

The Department of Defense follows USG orbital debris mitigation standard practices as outlined in the national space policy. DOD directive 3100.10, space policy, specifically provides that the creation of space debris shall be minimized. Minimization of space debris is to be incorporated into the design and operation of space tests, experiments and systems.

DOD space policy strives to minimize or reduce the accumulation of such debris in a cost effective way consistent with mission requirements. Additionally, debris mitigation efforts are documented and supported in DOD instruction 3100.12, space support. This instruction provides that debris mitigation practices must be considered in the acquisition and operation of space systems.

Implementing procedures for these policies and guidelines are found in the US Air Force Space and Missile System Centers, space debris mitigation handbook, revision 2.0. The document provides mitigation guidance, discusses orbital stability considerations for disposal orbits and gives detailed information about design and operational steps to minimize risk and avoid collisions with tracked objects during launch. Beginning in 2009, Space and Missile System Center is also requiring all acquisition programmes to generate an orbital debris assessment report at every phase, study, design, development and operations, including end-of-life disposal of system acquisition.

In addition, those agencies that license commercial satellites also have requirements in their licensing procedures that are intended to limit the creation and impact of space debris and these requirements are often complementary. For instance, the FAA licenses and regulates the launch and re-entry of launch and re-entry vehicles including both expendable and re-usable launch vehicles pursuant to statutory authority. The Secretary of Transportation may prevent the launch or re-entry of a payload if it would jeopardize the public health and safety, the safety of property or national security or foreign policy interests of the United States.

The FAA has implemented regulations addressing the mitigation of orbital debris caused by launch vehicles. Those regulations provide that a launch operator must ensure, for any proposed launch, that for all launch vehicle stages or components that reach Earth orbit: (a) there is no unplanned physical contact between the vehicle or any of its components and the payload after payload separation; (b) debris generation does not result from the conversion of energy sources into energy that fragments the vehicle or its components, energy sources include chemical, pressure and kinetic energy and; (c) stored energy is removed by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharged state and removing any remaining source of stored energy.

The Federal Communications Commission also adopted a comprehensive set of regulations concerning mitigation of orbital debris in June 2004. These regulations apply to the licensing of commercial US satellites and to the use of non-US satellites to provide service in the United States. The rules require disclosure, prior to authorization, of debris mitigation measures including end-of-life measures. They also provide operational requirements for US satellites.

The disclosure requirements can be placed in two broad categories. The first category is disclosure concerning actions to prevent the spacecraft from becoming a source of debris, either through planned operations or through spacecraft system failures during normal operations. These disclosures cover spacecraft shielding to prevent loss of control due to collisions with small debris, efforts to minimize explosions and to control of debris released during normal operations. The disclosure must also address methods of avoiding collisions with other large objects during normal operations, particularly where the operations present a potentially enhanced risk of such collisions, for example, co-location of geostationary spacecraft.

The second category is disclosure concerning post-mission disposal. The information disclosed is evaluated to determine whether grant of a licence meets the requirement under the Communications Act of 1934, as amended, that the proposed station serve the public interest, convenience and necessity.

The FCC rules require that, unless prevented by technical failures beyond the operator's control, the operator must discharge all stored energy sources on the spacecraft at the spacecraft's end-of-life. For geostationary spacecraft the FCC requires that the spacecraft be disposed of to an altitude derived from the formula in the Interagency Debris Coordinating Committee space debris mitigation guidelines. With a grandfathering exception for spacecraft launched prior to March 18, 2002.

Finally, the National Oceanic and Atmospheric Administration, in addition to its meteorological and environmental satellite mission, is responsible for licensing commercial remote sensing satellites. NOAA requires a clause on debris mitigation or system disposal in all of its licences. This requirement, which is set out in the code of federal regulations, requires that a licensee shall dispose of any satellites operated by the licensee upon termination of operations under the licence in a manner satisfactory to the President. The licensee shall obtain approval from the NOAA Assistant Administrator for Satellite and Information Services of all plans and procedures for the disposition

of satellites as part of the application process. Thank you Mr. Chairman and we look forward to continued discussions on this issue.

The CHAIRMAN Thank you very much distinguished representative of the United States of America for your contribution to the discussion on agenda item 10. You have provided us with a thorough ____ (?) of actions and institutions that have been undertaken or established in the United States for this purpose and all the sets of provisions that have been published by these different institutions. For me it was particularly interesting that you also emphasized that those agencies that license commercial satellites also have requirements in their licensing procedures that are intended to limit the creation and impact of space debris and these requirements are complementary to the other measures. You also, after this enumeration of different institutions and their actions and their rules, provided for us a certain categorization of the disclosure requirements that can be divided into two categories. First, the category of disclosure concerning actions to prevent the spacecraft from becoming a source of debris. Then also the second category which consists of disclosure concerning post-mission disposal. I finally watched your description of the role of the National Oceanic and Atmospheric Administration which is responsible for licensing commercial remote sensing satellites. NOAA requires a clause on debris mitigation, system disposal in all of its licensing. Thank you very much for a very interesting paper.

Distinguished delegates, I do not have any other delegation that would want to speak on this particular item. Is there any such delegation at this moment?

I see none.

Therefore I believe that we can continue our consideration of agenda item 10, national mechanisms relating to space debris mitigation measures on Monday morning.

Distinguished delegates, I would now like to begin our consideration of agenda item 11, national legislation relevant to the peaceful exploration and use of outer space. First I would like to remind delegates that the working group under this agenda item will begin its work next week under the Chair of Ms. Irmgard Marboe of Austria.

Is there any speaker on this item here at the Legal Subcommittee now at this afternoon's session?

I do not have such delegation on my list of speakers. Is there any speaker, now, that would want to deliver its statement on this particular issue?

I do not see any such delegation neither do I see any observer that would wish to speak on this item. Therefore I believe that we will continue our consideration of agenda item 11, national legislation relevant to the peaceful exploration and use of outer space, on Monday morning.

Distinguished delegates, at this late hour I would now like to adjourn this meeting but before doing so I would like to remind delegates of our schedule of work for Monday morning.

We will meet promptly at 10 a.m. At that time we will continue our consideration of agenda item 8, draft protocol on matters specific to space assets and continue our consideration of agenda item 9, capacity-building in space law. We will also continue our consideration of agenda item 10, national mechanisms relating to space debris mitigation measures and agenda item 11, national legislation relevant to the peaceful exploration and use of outer space. The working group on the status and application of the five United Nations treaties in outer space will also hold its fifth meeting.

Are there any questions or comments on this proposed schedule?

I see none.

Therefore this meeting is adjourned until 10 a.m. on Monday.

There is no meeting of working group 4 provided for this afternoon and therefore I thank you for your participation in this afternoon's session and wish you a good rest over the weekend. Thank you very much.

The meeting closed at 5.07 p.m.