

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

Unedited transcript

805th Meeting

Tuesday, 23 March 2010, 10 a.m.

Vienna

Chairman: Mr. A. Talebzadeh (Islamic Republic of Iran)

The meeting was called to order at 10.14 a.m.

The CHAIRMAN: Good morning distinguished delegates, ladies and gentlemen. I now declare open the 805th meeting of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space.

I would first like to inform you of the programme of work for this morning.

First, we will establish the Working Groups for this session. We will then continue our consideration of agenda item 4, General Exchange of Views, and begin our consideration of agenda item 5, Status and Application of the Five United Nations Treaties on Outer Space.

We will also begin our consideration of agenda item 6, Information on the Activities of International Intergovernmental and Non-governmental Organizations Relating to Space Law.

At the end of the Plenary, there will be two technical presentations. The first will be delivered by the representative of Tunisia on "Tunisian Outer Space Legislative Arsenal". And the second presentation will be delivered by the representative of Germany on "Satellite Data Security Act".

Are there any questions or comments on this proposed schedule?

I see none.

Establishment of working groups

First, establishment of Working Groups. The Working Group under item 5.

Distinguished delegate, in accordance with Paragraph 5 of General Assembly resolution 64/86, we should reconvene the Working Group under item 5, Status and Application of the Five United Nations Treaties on Outer Space.

I give the floor to the Secretary for an explanation. Please.

Mr. N. HEDMAN (Secretary, Office for Outer Space Affairs): Thank you Mr. Chairman, thank you indeed. Yes, regarding the reconvening of the Working Group under agenda item 5, Status and Application of the Five United Nations Treaties on Outer Space, under the chairmanship of Mr. Vassilios Cassapoglou of Greece, the Secretariat was informed recently that Mr. Cassapoglou will not be with us at this meeting due to unforeseen circumstances and he extended, through the Secretariat, his sincere regret and apologies to the Subcommittee for not being able to resume the function of Chairman during this session. The Secretariat has been informed that some consultations have been held and that there is a replacement for this year to chair the Working Group under agenda item 5 and the Secretariat has been informed that Mr. Jean-François Mayence of Belgium is prepared to chair the Working Group under item 5 during this session.

Thank you Mr. Chairman.

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.



The CHAIRMAN: I see no objection.

It is so decided.

I extend to Mr. Mayence my congratulations and warm wishes for the session of work this year.

Working Group under item 7. In accordance with Paragraph 5 of General Assembly resolution 64/86, the Legal Subcommittee will this year reconvene its Working Group under item 7 only to consider matters relating to the definition and delimitation of outer space.

May I, therefore, propose that we now reconvene the Working Group on this agenda item under the chairmanship of Mr. José Monserrat Filho of Brazil who ably led the work of this Working Group last year.

I see no objection.

It is so decided.

I extend to Mr. Monserrat Filho my congratulations and warm wishes for the session of work this year.

Working Group under item 12. In accordance with Paragraph 5 of General Assembly resolution 64/86, we should reconvene the Working Group under item 12 on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space.

In accordance with the Multi-Year Work Plan and agreed by the Subcommittee at its forty-sixth session and endorsed by the Committee at the fifth(fiftieth?), may I, therefore propose that we now reconvene the Working Group on this agenda item under the chairmanship of Mrs. Irmgard Marboe from Austria who ably led the work of this Working Group last year.

Of course, I see no objection.

It is so decided.

I extend to Mrs. Marboe my congratulations and warm wishes for this session of work this year.

General exchange of views (agenda item 4)

Now we are going to agenda item 4, General Exchange of Views.

Distinguished delegates, I would now suggest that we consider consideration of item 4 on the agenda, General Exchange of Views.

The first speaker on my list is the distinguished delegate of Morocco.

I give the floor to the distinguished delegate of Morocco.

Mr. S. RIFFI TAMSAMANI (Morocco) (*interpretation from French*): Thank you very much. Chairman, the delegation of Morocco would like to congratulate you upon your election to the Chair of this Committee. Your experience will indubitably significantly be contributing to the work to be done in this Committee. And we would also like to most sincerely thank the outgoing Chairman, Mr. Kopal, for his extremely high-quality work.

We would also like to take this opportunity to thank Dr. Othman, as well as all her co-workers for the excellent work done in preparing this session.

The delegation of Morocco would like indeed to support this work and contribute to its thinking to the final ends of our considerations.

The delegation of Morocco would like to stress the importance that we attach to the work of the Legal Subcommittee which is the real source of present outer space law at international level and this is very comprehensive law indeed. However, it calls for certain improvements and enhancements which would allow for the extension and the implementation of the following principles, the access to space for the peaceful application on the part of all States especially developing States, protection of the environment, as well as space resources, and the establishment of a legal framework allowing the regulation of access to space data. These principles can contribute to the improvement of the political(?), of the economic and social policies of a State. It can also contribute to the improvement of international cooperation and can work to enhance our response against various scourges of humanity, the challenge which affect all of the aspects of economic and social development, poverty, hunger, natural disaster management, so that indeed international outer space law would be international and universal in its coverage.

Indeed, it is necessary for us to realize that the developing countries need to step up their capacities in the field of outer space laws to allow them, on the one hand, to fulfil their obligations, and on the other hand, to get more involved in the actual practical hands-on

use of outer space technology. And the Office for Outer Space Affairs indeed is the only body able to promote the five treaties on outer space in developing countries and to give the necessary assistance, enabling these States to ratify and implement and to properly integrate these things, enact them within their national legislation.

Morocco, through its Royal Centre on Remote Sensing, in collaboration with various international regional partners, continues and pursues its work in order to enhance sensitivity on the regional level for these issues. We organize regional seminars and international seminars with various topics on outer space law. We promote and integrate education on outer space law in our curricula and our Regional Centres are also working to promote the national expertise in this field. And indeed, the Royal Centre on Remote Sensing has been organizing courses on outer space law, both introductory as well as updating courses for African Regional Centre students on science and technology having to do with outer space, in Rabat, and this ever since the session of 2006-2007 and this has been pursued for the following graduation years as well.

In 2009, during the summer courses on navigation and services based on satellite positioning, GNSS, organized by CRASTE-LF, in collaboration with the BAS and supported by the International Committee on the System of Global Sat Navigation, ICG, the CRTS is ensured of seminars and courses on legislation aspects on outer space technology, particularly outer space law.

All of these activities have once again served to demonstrate that African players concerned by the technologies and space applications who have shortcomings because of their lack of information, lack of qualifications and access to basic issues such as the access to space data, access to space technologies, access to training in the field of outer space. It can indeed benefit from these courses. This demonstrates that our qualifications and capacities can indeed be usefully practically reinforced.

I would like to take this opportunity to inform our Subcommittee that the European Centre, ECSL, as well as the Royal Centre for Outer Space Remote Sensing, CRTS, together with the CRASTE-LF, the African Regional Centre on Science and Technologies in French-speaking countries, this year is organizing and hosting a very intense two-day class on space technology legislation and this addressed to African students who are in the third post-graduate courses in meteorology and world climate and this is organized by

CRASTE-LF, as well as by researchers and end-users of space in Morocco. We certainly hope that the BAS will be able to support this initiative and we call upon participants to the seminar to attend.

As concerns item 7 on the agenda, that is definition and delimitation of the use of GSO, Morocco would like to stress the need for our Legal Subcommittee to discuss most attentively this whole issue in a very practical, pragmatic fashion because in the absence of a definition, with a clear delimitation, we can just necessarily be confronted with increasing legal confusion as to the application of space law and outer space law. Issues having to do with the sovereignty of a State over near-Earth space and outer space need to be clarified in order to avoid any possible disputes amongst States.

Now, as regards item 13 of the agenda, our delegation would like to express its satisfaction with the fact that there has been incorporation into the agenda of our Subcommittee of an item specifically dealing with space debris. Given the amount of space debris which is increasingly being generated and its impact on all of the space activities in Morocco, we do indeed believe, in our delegation, it is necessary to implement adequate measures to mitigate the consequences of such phenomenon and indeed a regulatory context with regard to this matter has to be rapidly established in pursuance to the principles of the peaceful use of outer space to preserve the interests of all States.

As for item 8, because of the importance of this item, as well as the impact of the use of outer space nuclear energy sources and its impact on safety and security is indispensable for the Legal Subcommittee to go more into this debate and to evaluate the relevance of the revision of principles regulating the use of nuclear energy sources and getting more information on these issues. We are very interested in this issue being developed and indeed it is important to see the importance of the work of the mixed Group of Experts within the 2007-2010 Work Plan.

Today, I would like to say, Chairman, that the work of a specialist on outer space law should not be limited to just recalling the principles of existing international law. He should also be able to take into account the contributions coming from the scientific, technical and policy levels and sources. It is necessary to maintain a very fruitful dialogue amongst the various players in the field of exploration and the use of outer space and this can only be done with the

recognized efforts of the United Nations Legal Subcommittee.

We will be speaking later about the various other elements of the agenda within our Legal Subcommittee.

Thank you very much for your attention Sir.

The CHAIRMAN: I thank the distinguished representative of Morocco for a very good statement.

The next speaker on my list is the distinguished representative of Belgium. I give the floor to the distinguished delegate please.

Mr. J.-F. MAYENCE (Belgium) (*interpretation from French*): Mr. Chairman, first and foremost, my delegation would like to commend you upon being elected to the Chair of the Subcommittee. You may rest assured of the support and cooperation of the Belgian delegation, Sir, as to secure the success of our work.

This forty-ninth session of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space opens at a very eventful time where there is a lot of thinking underway as regards to the future of space activity and in particular those pertaining to the use and occupation of terrestrial orbits.

Belgium is happy to see us looking into the long-term viability of space activities through the placing of this item on the agenda of its Scientific and Technical Subcommittee and the setting up of an Ad-Hoc Group to handle these matters. Along with this, work on the drawing up of a Code of Conduct for Space Activities undertaken by the European Union, international dialogue pertaining to the security of space activities and other thinking on this matter set and trained by other institutions like the International Arbitration Court in The Hague testify to a salutary growing awareness of the importance of security in space activities, for a while, space can do a good deal for us, we can do a good deal for space.

We are of the view that work on the technical and scientific aspects, as well as on the political and economic aspects pertaining to this matter, should be accompanied by some deep thought on its legal aspects. This requires highly specialized expertise and we believe that this Subcommittee is the most appropriate and most legitimate forum to undertake it.

Mr. Chairman, the burgeoning of norms, standards, codes and lines of conduct, all of which are qualified as non-binding, the force has some bearing on the legal framework of space activities. The mechanisms put in place and the United Nations treaties and conventions does not allow us to overlook the consequences of the adoption of such norms and obligations on the part of States, governments and undertakings.

Along these lines, the concept of fault liability, as enshrined in the Liability Convention of 1972, provides a bridge between the international obligations of States on the one hand, and the technical norms developed in many fora. Do we take it that henceforth the fault of a State Party or someone acting on behalf of a State should be established on the failure to comply with recommendations, norms and standards of an international organization of different origins, scopes and kinds? Could we deem it that a State is at fault if it authorizes the launching of a space object that does not meet the recommendations of technical and scientific bodies?

If the answer is positive, then we cannot(?) but encourage all States organizations as use and involved, players, working groups tasked with drawing up such norms to coordinate their efforts so as not to jeopardize the legal security and the legal certainty of space activities. It would be helpful that they should incorporate in their thinking all aspects of the knock-on effects of their work in this area. I am referring to the political aspects, technical ones, as well as economic, financial and legal ones. It would be helpful, it seems to us, to look into the current relevance of the concept of fault liability as it applies to damage wrought in outer space.

Without calling for the revision of the terms and provisions of the Convention of 1972, we are of the view that a better delineation of the concept, the concept of fault, as well as a better definition of the criteria on which the commission of such a fault should be established, should allow each State to determine the norms and standards it needs to transpose and implement in its national legislation or regulations applicable to space activities. It is essential that we work towards relative uniformity in the application of such norms so as to avoid all forms of dumping or distortion of competition between constructors and operators throughout the world so as not to favour those who do not comply with these constraints over those who do. The efficacy of these norms hangs thereon and they are indeed a remedy by overall.

Mr. Chairman, the working of space activities hinges on, and is predicated on many factors including the legal framework within which they are regulated. This depends on a delicate balance which means that we require great rigour in the adoption of measures and benchmark norms which are applicable. Each expert has to play a role for those aspects in which he is specialized.

As of the experts, the Legal Subcommittee should certainly provide a contribution which we would like to see as arrive at balanced, effective and sustainable solutions.

Thank you very much.

The CHAIRMAN: I thank the distinguished representative of Belgium for a very good statement.

The next speaker on my list is the distinguished representative of Italy. I give the floor to the distinguished representative of Italy.

Mr. G. GHISI (Italy): Thank you Mr. Chairperson. I join previous speakers in congratulating you on your election. The Italian delegation is sure that under your wise leadership, this session will reach fruitful results.

We take this opportunity to praise also the remarkable work of Professor Vladimir Kopal in chairing the Legal Subcommittee during the last biennium.

My delegation would also like to extend its gratitude to the Director of the Office for Outer Space Affairs and to her staff for their hard work in organizing this meeting.

Mr. Chairman, on the United Nations treaties, let me stress how Italy has always supported the action of the Legal Subcommittee aimed at centring the existing treaties and principles by committing the States Parties to comply, to make progress towards adherence to them, to fully implement them, also through national legislation, and to promote their universality.

The involvement of new space-faring countries worldwide in outer space activities and the widening of outer space applications require universal adherence to the United Nations treaties to preserve, advance and guarantee the exploration and the peaceful use of outer space.

If we consider the growing interest for the implementation of new projects, activities and missions aimed at exploring and using the celestial bodies and their resources, these treaties and principles are of a high value. Italy is part of four of the five United Nations on Outer Space.

As to the 1979 Moon Agreement, we are giving due consideration to the possible benefits deriving from it.

We believe that the Legal Subcommittee should also be actively involved in the development of new guidelines to ensure the safety, security and predictability of the outer space activities aiming at limiting or minimizing any harmful interferences in outer space. It is indeed necessary to respond to the growing concern within the international community on preventing outer space from becoming an area of conflict.

Among the initiatives which could usefully complement international space law, Italy fully supports to the principles contained in the draft International Code of Conduct for Outer Space Activities. At the same time, Italy is committed to fully implement, through national mechanisms, the United Nations Space Debris Mitigation Guidelines.

Mr. Chairman, at its forty-eighth session in 2009, the Legal Subcommittee expressed its satisfaction with the participation of the Office for Outer Space Affairs as an observer in the Negotiating Sessions of UNIDROIT and agreed that the Office should continue participating in those sessions. The Subcommittee also agreed that this item should remain on the agenda.

The year 2009 saw a watershed in the process of completion of the draft Protocol on Space Assets, thanks to the decision of the UNIDROIT Secretariat to reconvene in Rome, the third session of the Committee of Governmental Experts in the light of the positive results of this intersession work on key outstanding issues. The Committee of Governmental Experts met in Rome in December 2009 and started reviewing the draft Protocol. We are happy to note that during this session, further progress was reached on pending issues.

We consider a positive result that at the fourth and last session of the Committee of Governmental Experts has been already convened by UNIDROIT from 3 to 7 May of this year in Rome. This last session would permit to complete the negotiation process and pave the way towards a Diplomatic Conference for the

adoption of the Space Assets Protocol, hopefully to be convened in 2011.

Mr. Chairman, turning now to capacity-building. We congratulate the Office for Outer Space Affairs for having organized the Annual Workshop on Space Law and the development of a curriculum for a basic course on space law.

The Workshop in Tehran, organized in cooperation with the Iranian Space Agency, and with the support of the Asia-Pacific Space Corporation Organization, confirmed the importance of such initiatives for the enhancement of regional cooperation in the peaceful uses of outer space.

Concerning the curriculum, I would like to reiterate the Italian appreciation for the progress made in the preparation of the curriculum for a basic course on space law that could be included in the educational programmes of the Regional Centres on Space and Technology Education affiliated to the United Nations. We are confident that the efforts made so far will soon produce fruitful operational results.

Let me also express appreciation to the International Institute for Space Law and to the European Centre for Space Law for having organized a very interesting Symposium on "National Space Legislation: Crafting Legal Engines for the Growth of Space Activities" which addressed the need to implement the outer space treaty national law in the light of the current and foreseeable space activities space legislations as enhancement of space activities and policies.

Concerning the legal development at national level, I wish to inform you that in a short time the Italian Space Agency will adopt the Regulation on National Registry for Objects Launched into Outer Space, as provided by the 1975 Convention on Registration. This Regulation will also deal with some specialized issues, such as the transfer of ownership of space objects and authorized space activities to third parties.

To conclude, Mr. Chairman, several delegations voiced the need for a more efficient and cost-effective work of the two COPUOS Subcommittees. In the same spirit, I wish to recommend that informal talks start among member States during this session to see whether we can agree on the setting up of an informal working group on the streamlining of the work of the Subcommittees.

Thank you Mr. Chairperson.

The CHAIRMAN: I thank the distinguished representative of Italy for a very good statement.

The next speaker on my list is the distinguished representative of Canada. I give the floor to the distinguished representative of Canada.

Mr. C. SCHMEICHEL (Canada): Thank you Mr. Chairman. Canada looks forward to a productive and successful forty-ninth session of the Legal Subcommittee this year.

Mr. Chairman, the steady increase in space activities, either from the States themselves or from private concerns, continues to present us with new and unique challenges with regard to the interpretation and implementation of the international legal framework governing such activities. Canada reiterates its strong support for the core United Nations Conventions on Outer Space and welcomes initiatives aimed at strengthening them. Canada trusts that the work of the Legal Subcommittee will ultimately contribute to building a more secure and accessible space environment in that respect.

Mr. Chairman, for Canada, this past year was an opportunity to commemorate a number of historic milestones. We are also laying the foundation for the future. Canada celebrated the Canadian Space Agency's twentieth anniversary, as well as the twentieth anniversary of the first space flight of a Canadian astronaut, and 30 years of cooperation with the European Space Agency. Canada is currently moving towards a renewal of its successful partnership with the European Space Agency through the conclusion of an updated Canada-ESA Agreement.

Canada also strengthened its cooperation with the United States by signing an overarching Framework Agreement on Space Cooperation. Canada and the United States established a Space Cooperation Forum in which our countries will explore collaborative opportunities on space-related activities in areas such as Earth observation, satellite communications and space situational awareness, among others.

In addition to these long-standing partnerships, Canada pursued its cooperation with a number of other countries as well, including Finland, Russia, Japan, India, China, Senegal, to name only a few.

Looking towards the future, the Government of Canada announced its intent to secure funding the

RADARSAT Constellation Mission and the Canadian Space Agency continues to develop Canada's long-term Space Plan. Through this Plan, Canada is expected to commit to further projects and programmes that provide strengthened security, improviabilty(?) to monitor our environment and mitigate changes to our climate, especially in relation to the Arctic, working together as nations to cooperate in the exploration of our solar system, and advancing knowledge for the benefit of humanity.

(Continued in French) Mr. Chairman, in closing, please allow me to stress the importance of some of the agenda items to the Canadian delegation.

On the topic of space debris, Canada supports activities to mitigate the creation of space debris and commends you and COPUOS efforts in this area. In this respect, Canada has started to implement measures consistent with the Space Debris Mitigation Guidelines adopted by the United Nations General Assembly in 2007, and strongly urges all States to do the same.

However, we recognize that as our reliance on space-based assets and the number of space players increases, the global community must continue to be diligent in actively pursuing solutions to limit the amount of space debris produced in order to sustain the space environment for the long-term.

It is for this reason that Canada is pleased to note that at the forty-seventh session of the Scientific and Technical Subcommittee, a Working Group for the Long-Term Sustainability of Outer Space Activities was established and that Mr. Peter Martinez of South Africa has been elected to chair this Group.

Now, with regard to nuclear power sources, Canada strongly supports the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as adopted by the United Nations General Assembly in December 1992. The Principles have served and continue to serve the international community well.

In that respect, Canada commends the adoption of the Safety Framework for Nuclear Power Source Applications in Outer Space by the Scientific and Technical Subcommittee at its forty-sixth session in 2009, as well as endorsed at the fifty-second session of COPUOS in June 2009.

We are also pleased that in the forty-seventh session of the Scientific and Technical Subcommittee of COPUOS, a Multi-Year Work Plan focusing on ways of promoting and facilitating the implementation

of the Framework through workshops and other outreach activities was also adopted.

Considering that the safety concerns and implications of an accident are serious indeed, Canada will search for ways to implement this Safety Framework and encourages all actors involved in the development of nuclear powered systems used for outer space activities to do the same.

Finally, Canada is pleased with the fruitful exchange of information which took place at the forty-eighth session of the Legal Subcommittee on "National Legislation Relevant to Peaceful Exploration and Use of Outer Space". It is the hope of the Canadian delegation that discussions on this agenda item at the forty-ninth session will, once again, be productive as well as informative.

Thank you very much Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Canada for a very good presentation.

The next speaker on my list is the distinguished representative of India. I give the floor to the distinguished representative of India.

Ms. N. CHADHA (India): Thank you Mr. Chairman. We join other delegations in congratulating you on your election as Chairman of the Legal Subcommittee. We are confident that with your rich experience and under your able guidance, this session will achieve its objectives and assure you of the full support and cooperation of the Indian delegation.

We take this opportunity to recall the significant contribution of Professor Vladimir Kopal as the Chairman of the last two sessions and express our appreciation for his able stewardship.

We would also like to thank the United Nations Office for Outer Space Affairs, its Director, Mazlan Othman, and her colleagues for their work and preparation of this meeting.

Mr. Chairman, since the last session in 2009, India has carried out several significant space activities. On 20 April 2009, India's Polar Satellite Launch Vehicle, the PSLV-C12, on its fourteenth successive successful flight placed in orbit a Radar Imaging Satellite, RISAT-2, manned flight(?) applications in disaster management, and a small satellite called NSAT, built by the Indian student community with ISRO's guidance. ISRO is the Indian Space Research Organization.

On its fifteenth successive successful flight, PSLV-C14 placed OCEANSAT-2, and other six international nano-satellites in orbit on 23 September 2009. OCEANSAT-2, the second satellite and oceanographic series, carries ocean colour monitors, a scatterometer and an atmospheric sounder. Noting the great demands for demands for the data from the scatterometer, India has agreed to share the data with other international agencies, such as NOAA and EUMETSAT, for the operational and scientific applications.

Mr. Chairman, the Indian delegation is pleased to report that India's first unmanned lunar mission, CHANDRAYAAN-1, has greatly contributed in conclusively establishing the presence of water and hydroxyl molecules on the lunar surface. The CHANDRAYAAN-1 mission, which also carried payloads from the international scientific community, has collected invaluable data for, *inter alia*, scientific research on lunar topography, the gravitational field and mineral resources.

Building upon these and other successes, Mr. Chairman, many more missions are scheduled for 2010 to augment in the Earth's constellation of remote sensing and communication satellites.

Currently, India is getting ready for the launch of CARTOSAT-2B, RESOURCESAT-2, a Radar Imaging Satellite, RISAT-1, for natural resources management, GSAT-4, a technology demonstrator, and a satellite with communication and navigation payloads, an ISRO-CMES joint mission, Megatropics for tropical atmospheric studies, and several for studying the oceans surface.

Additionally, YOUTHSAT, a small satellite with the participation of the Moscow State University, XSAT, built with the participation of NTU of Singapore, SAPPHIRE and Analysis-6 satellites of Canada, an ALSAT-2 from Algeria, a schedule to be launched as co-presenters in these flights.

Mr. Chairman, the emphasis of the Indian Space Programme has always been on integrating the advances in space technology and applications with national developmental goals, particularly in regular services such as telecommunications, meteorology, disaster warning, natural resources, survey and management, and television broadcasting.

India places great importance to international cooperation in space activities, mainly in taking up new scientific and technological challenges, defining

an international framework for exploration and utilization of outer space for peaceful purposes.

Currently, India has formal instruments of cooperation with more than 30 countries and international organizations. Many of these understandings pave the way for sharing our expertise in the use of space-derived geo-spatial information for sustainable development.

India also plays an active role in several international bodies, in fostering partnerships with the member countries in the use of space technology for the benefit of mankind.

India has been contributing towards capacity-building in the field of international space law, both domestically and internationally. ISRO provides financial and technical support for local (legal?) research activities and contemporary issues in outer space law for primer(?) academic institutions in India. We encourage the participation of Indian teams in the Manfred Lachs Space Law Moot Court Competition. A winning team, selected through a national selection process has been financially supported by ISRO for participation in the regional rounds since 2004. It is my pleasure to inform this Subcommittee that the Indian team from the National Law School in India University, Bangalore, has won the World Finals in 2009, held in Daejeon, South Korea.

Likewise, India takes special interest in providing expertise and services for capacity-building in the application of space technology in developing countries. The United Nations Centre for Space Science and Technology Education for the Asia and Pacific Region, operating from India, is an initiative in this direction. Today we were pleased to receive a copy of a newsletter describing activities of this Organization.

Mr. Chairman, we are of the view that the five United Nations space treaties, evolved through consensus and accepted by a large number of countries, constitutes the cornerstone of international space law. We favour universal adherence to these treaties. The review of the status and application of these five treaties is important for encouraging States which are yet to accede to them to do so.

The Indian delegation is of the view that GSO is an integral part of outer space and thus is governed by the Outer Space Treaty. Our discussions on this issue and on the subject of definition and delimitation of outer space are crucial to arriving at a common understanding in this regard.

Mr. Chairman, we would also like to reiterate our commitment to the use of outer space for peaceful purposes. We favour the development of legal principles and guidelines in the framework of the existing legal regime of space law for facilitating the peaceful use and exploration of outer space for all countries, including the developing countries. We believe that it is the responsibility of every nation to maintain outer space exclusively for peaceful purposes and refrain from trying new ventures that are violative of the very concept of the peaceful use of outer space. We would like to emphasize that the orderly conduct of space exploration activities in the future will largely depend on observance of the Space Debris Mitigation Guidelines by all space-faring nations, assured safety and security of the space assets and capabilities of all countries in the interest of all and is of paramount importance for prospering together. We are confident that our deliberations in this august body will contribute significantly towards this goal.

In the end, we would like to thank the International Institute of Space Law and the European Centre for Space Law for organizing yesterday the Symposium on “National Space Legislation: Crafting Legal Engines for the Growth of Space Activities”. This was a timely activity that brought out many significant aspects pertaining to national space legislations which will be of great use to member States.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of India for a very good statement.

The next speaker on my list is the distinguished representative of the United States. I give the floor to the distinguished representative of the United States.

Mr. S. McDONALD (United States of America): Thank you Mr. Chairman. Mr. Chairman, I would like to begin by congratulating you on your election as Chairman of this Subcommittee. This Subcommittee will surely continue to make important contributions to the refinement and development of outer space law under your leadership.

It is a pleasure to be here in Vienna to meet with this distinguished group of legal experts. The Subcommittee’s last session was a very productive one and we look forward to continue progress in addressing issues of practical concern to all of us.

COPUOS and this Subcommittee have a distinguished history of working through consensus to develop space law in a manner that promote, rather than hinders, the exploration and use of outer space for peaceful purposes.

In particular, this Subcommittee should be commended for its role in establishing the core outer space treaties, the Outer Space Treaty, the Rescue and Return Agreement, and the Liability and Registration Conventions. Under the legal framework of these treaties, use of space by nations, international organizations and now private entities has flourished. As a result, space technology and services contribute immeasurably to economic growth and improvements in the quality of life around the world.

This session is also an opportunity for us to consider the fact that many States have not acceded to the four core treaties, including some members of COPUOS. This Subcommittee should invite States and international organizations to consider ratifying and implementing the four core space law instruments cited above, and, of course, it should encourage States that have accepted the core instruments to look at the sufficiency of their respective national laws to implement them.

Before turning to the work of the Subcommittee for this session, I would like to comment briefly about recent space-related activities in the United States.

With regard to the United States Civil Space Programme, NASA has completed five Space Shuttle missions in 2009, four to the International Space Station, or ISS, and one to service the Hubble Space Telescope. The ISS reached an important international milestone as Expedition 20 inaugurated the Station’s first six-person crew and also marked the first time the mission’s crew represented all five International Space Station partners.

The NASA Lunar Reconnaissance Orbiter, or LRO, was launched on 18 June 2009 and is now mid-way through a scheduled one-year exploration mission in a polar orbit of about 31 miles above the lunar surface, the closest any spacecraft has orbited the Moon. LRO will produce a complete map of the lunar surface in unprecedented detail, search for resources and safe landing sites for human explorers, and measure lunar temperatures and radiation levels.

On 9 October, NASA’s Lunar Crater Observation and Sensing Satellite, or LCROSS, created twin impacts on the Moon’s Cabeus Crater, a

permanently shadowed region near the Moon's South Pole. LCROSS, and its spent Centaur Upper Stage Rocket, impacted at a speed at more than 1.5 miles per second. The LCROSS Science Team is working to understand the full scope of the impact results but preliminary data indicates that the mission successfully uncovered water during the encounter.

Meanwhile, at Mars, the Mars Reconnaissance Orbiter, or MRO, continued to produce valuable science and stunning images with its advanced set of instruments. Since its arrival at Mars in 2006, MRO has returned more data about the Red Planet than all other spacecraft combined. The Twin Mars Exploration Rovers, Spirit and Opportunity, continue to produce scientific results while operating far beyond their design life. The mission, designed to last 90 days, celebrated its sixth anniversary in January 2010, although Spirit has been lodged in a sandtrap since last April and both Rovers show signs of aging. They are both still capable of exploration and scientific discovery.

Meanwhile, development continues on the Mars Science Lab, recently named Curiosity. MSL is due to launch in 2011 and become the first Red Planet Rover since Spirit and Opportunity. Though it would be hard to match the Twins toughness, Curiosity will have a much greater range, more instruments and a bigger, stronger robotic arm.

In 2009, the Hubble Space Telescope continued to make unprecedented observations. The Spitzer Space Telescope continued its search for planets outside of our solar system and the Fermi Gamma Ray Telescope is exploring the most extreme environments in the Universe, searching for signs of new laws of physics and investigating dark matter.

NASA successfully launched the Kepler Space Telescope on a three-year planet-hunting mission and NASA's New Horizons mission to Pluto, which passed by Jupiter in 2008, is currently in an inter-planetary cruise phase due to arrive at Pluto in 2015.

NASA also continued the important effort of coordinating its exploration plans with other space agencies through the Global Exploration Strategy International Space Exploration Coordination Group, or ISECG. ISECG meetings were held in March 2009, in Yokohama, Japan, and in December 2009, in the Netherlands. ISECG participants focused on the development of non-binding findings, recommendations and other products to be used by participating agencies to identify synergies and their

respective exploration programmes. Clearly, we are demonstrating that space exploration is a global effort.

President Obama's Fiscal Year 2011 budget for NASA announced in February 2010, marks a bold and innovative step forward for the United States Space Programme. It increases funding for NASA by six billion dollars over the next five years. Highlights of the plan include working with international partners to extend the life of the International Space Station and to fully utilize its capabilities for research and technology demonstration; cancelling the Constellation Programme and instead investing in the critical and transformative technologies, such as heavy lift and propulsion, in-orbit fuel depots and inflatable habitats, all with the goal of increasing technological capabilities, decreasing costs and expanding opportunities for human exploration of the solar system while working collaboratively with nations around the world; partnering with industry in a fundamentally new way for commercially-provided astronaut transportation to the ISS; initiating a stream of new robotic exploration missions to scout locations for future human missions; increasing NASA's funding for aeronautics and Earth and space science activities; and working to inspire more young people to engage in science and technology.

Over the coming months, the Obama Administration will be working with the Congress on enactment of legislation supporting these new initiatives. International cooperation will be a key element of all of this new direction. NASA hopes to work with international partners as team members in the new flagship technology demonstration programmes, robotic pre-cursor missions and, of course, in continuing the successful ISS partnership.

The latest Geostationary Operational Environment Satellite, GOES-14, operated by the United States Oceanic and Atmospheric Administration, was launched on 27 June 2009 and was put in on-orbit storage to join the GOES-13 as back-up for NOAA's two operational GOES satellites.

Additionally, this past November, continuing its support to South America, NOAA replaced the recently decommissioned GOES-10 with GOES-12 to allow South American users to continue crucial satellite detection of sibia(?) storms, floods, drought, landslides and wildfires. This is a good example of the kind of international cooperation envisioned by the Global Earth Observation System of Systems.

The last of NOAA's Polar Orbiting Operational Environmental Satellites, NOAA-19, was

launched on 6 February 2009 and declared operational on 2 June 2009 becoming the primary afternoon satellite in the initial joint polar system constellation.

The United States Geological Survey of the United States Department of the Interior continues to operate the LANDSAT-5 and 7 satellites and make their data available to users worldwide. LANDSAT provides essential information for land surface monitoring, eco-systems management, disaster mitigation and climate change research. In 2009, LANDSAT-5 marked its twenty-fifth year of successful operations. Since 2008 when the full United States LANDSAT Image Archive was made available to users, free of charge, over the Internet, we have witnessed phenomenal growth in the deliver of LANDSAT scenes to users worldwide. Since opening the Archive, over 1.5 million images have been provided to users in 180 countries. The free availability of these geographic information system-ready land imaging data has had a tremendous global impact on Earth's system science and land surface monitoring.

Through our participation in the Group on Earth Observation, we are working to encourage other nations to open up access to previously unavailable datasets. Coordinated efforts to make this data available are critical for advancing the implementation of the Global Earth Observation System of Systems.

NASA and the USGS are working in partnership to develop the space and ground systems for the LANDSAT Data Continuity Mission, which will be renamed LANDSAT-8, after its December 2012 launch and on-orbit check-out. This satellite will continue the collection of moderate resolution land imagery that was begun in 1972. The USGS will make LANDSAT-8 data freely available to users worldwide through an easy-to-use web interface.

The United States is prepared to build upon its rich history of international cooperation to achieve its goals and, among other things, studying Earth from space to advance scientific understanding and meet societal needs, studying the Sun and its effect on the Earth and the solar system, discovering the origin, structure and evolution of the Universe and space exploration.

The United States is also prepared to pursue other forms of international cooperation with foreign nations and international consortia on space activities that are of mutual benefit and that further the peaceful use of space. Potential areas for expanded cooperation include the provision of United States space

surveillance information, the satellite operators as well as the development and operation of new Earth observation systems.

As we proceed with our work at this session, Mr. Chairman, I would like to reflect, once again, on the extraordinary record of success the Subcommittee has had in advancing the field of space law. I believe that much of this success is due to this Subcommittee's ability to focus on practical problems and to seek to address any such problems, be it consensus-based and results-oriented process. We should aim in our discussions to continue that tradition and to avoid the temptation to focus on theoretical rather than practical issues.

In addition, the Subcommittee's success may be attributed to its avoidance of protracted debate on extraneous political issues.

Thank you for your consideration and my delegation looks forward to a productive and collegial session.

The CHAIRMAN: I thank the distinguished representative of the United States for a very good statement.

The next speaker on my list is the distinguished representative of the International Institute of Space Law. I give the floor to the distinguished representative of the International Institute of Space Law.

Ms. T. MASSON-ZWAAN (International Institute of Space Law): Thank you Mr. Chairman. On behalf of the International Institute of Space Law, I would like to join many others to congratulate you, Dr. Ahmad Talebzadeh, on your election as the new Chairman of the Legal Subcommittee.

I would like to pay tribute to Professor Vladimir Kopal who is also the Vice-President of the IISL for his successful chairmanship over the past few years.

Then we would like to salute also Dr. Mazlan Othman of the Office for Outer Space Affairs and her most efficient and dedicated staff.

A report on the activities of the IISL has been distributed to the delegates. Therefore, I will here only summarize some its highlights and focusing mostly on our plans in the current year.

The IISL is represented by several members of its Institute as official observer in the delegation to this Legal Subcommittee meeting in Vienna. We are proud to have been granted the status of Permanent Observer with COPUOS some years ago, after having served as observer in this Committee on behalf of the IAF, the International Astronautical Federation, for many years.

Yesterday, IISL and ECSL organized a Symposium for the delegates on the topic "National Space Legislation: Crafting Legal Engines for the Growth of Space Activities". The event was well received by the delegates and was followed by a reception. We do look forward to organize a similar event next year.

On 7 and 8 April, also in Vienna, the IISL will co-organize with ESPE, ISPRS and the International Academy of Astronautics, a Conference on the Legal Issues of Satellite Earth Observation. This Conference will deal with two important topical aspects of satellite Earth observation, namely treaty monitoring and law enforcement through satellite Earth observation, and privacy conflicts from high-resolution imagery.

On 11 May, in Washington D.C., the IISL will organize with the International Academy of Astronautics, the first IISL/IAA Symposium on Space Law 2010 and Policies Perspectives, this time in partnership with the Secure World Foundation, Arianespace and ESPE.

The Symposium will celebrate the fiftieth anniversary of the IISL and of the IAA.

Also on the occasion of this fiftieth anniversary, the Institute is planning to re-publish the 1972 book by the late judge Manfred Lachs with the title "The Law of Outer Space: An Experience in Contemporary Law Making". And we are also planning a publication to commemorate 25 years of the IAA/IISL Scientific Legal Roundtable sessions which are held at the International Astronautical Congress.

From 27 September to 1 October, the IISL will hold its fifty-third Annual Colloquium on the Law of Outer Space at the International Astronautical Congress in Prague. The Colloquium will have five session topics, for which almost 100 abstracts have been submitted which will be evaluated in Paris later this week.

The first session is Nandasiri Jasentuliyana Keynote Lecture and the second the Young Scholar Session. The Keynote Lecture will look back on the

history of space law and of some of the space pioneers in our guest host country. The second Young Scholar Session has received a record number of abstracts which makes us very happy.

The second session will deal with the Moon Agreement: 30 Years of the Moon Agreement Perspectives. The third session will deal with legal aspects of space security. Then we will have a session on the current status of the rule of law with regard to space activities and our traditional session on recent developments in space law.

The twenty-fifth Scientific Legal Roundtable Session will deal with the new age of small satellite missions.

In Prague, we will also celebrate the semi-finals and finals of the nineteenth Manfred Lachs Space Law Moot Court Competition. Three judges of the International Court of Justice has, as every year since the beginning, accepted to judge the finals and regional rounds will be held in Europe, North America and the Asia-Pacific region during the month of April.

IISL would like to take this occasion to express its deep appreciation to the organizations that support the winners of these regional rounds to participate in the world finals. They are the Association of US Members of the IISL and Secure World Foundation for the North American Round, the Japanese Aerospace Exploration Agency, JAXA, for the Asia-Pacific Round, and the European Centre for Space, ECSL, for the European round.

The IISL is hoping to expand the competition to other regions in the near future. We are very happy, as was already reported by the Indian delegate, that this year we will have for the very first time a winning team from India, the National Law School of India University in Bangalore.

The runner-up this year was Georgetown University in Washington D.C. and the second runner-up was the University of Strathclyde in the United Kingdom.

On 2 December next we will organize the fifth Eileen Galloway Symposium on Critical Issues on Space Law in Washington D.C., which is organized with the National Centre for Remote Sensing, Air and Space Law of the University of Mississippi.

In terms of publication, the proceedings of the IISL for 2008 have been published by the American

Institute of Aeronautics and Astronautics, and the proceedings for 2009 are currently being put together.

The report on the Standing Committee on the Status of International Agreements Relating to Outer Space Activities has, as usual, been prepared by Dr. Terkhov of the United Nations and will be published in our proceedings and on our website.

The IISL also prepared material for the Annual United Nations Review of Developments in International Cooperation in Space Law under the title "Highlights in Space" and submits its annual report of activities to COPUOS.

To conclude, Mr. Chairman, I would like to say once more on behalf of my colleagues in the Board of Directors of the IISL that we are honoured to cooperate with COPUOS and its subsidiary bodies in the further development of space law and we hope to continue to be of assistance.

Thank you.

The CHAIRMAN I thank the distinguished representative of the International Institute of Space Law for a very good statement.

Are there any other speakers on the general exchange of views at this time?

I see none.

We will, therefore, continue our consideration of agenda item 4, General Exchange of Views, this afternoon.

Status and application of the five United Nations treaties on outer space (agenda item 5)

Distinguished delegates, I would now like to begin our consideration of agenda item 5, Status and Application of the Five United Nations Treaties on Outer Space.

I would like to remind delegates that this item will also be considered by the Working Group on Item 5.

There are no speakers on the list.

Are there any delegations wishing to make a statement on this agenda item at this morning's meeting?

I see none.

We will, therefore, continue our consideration of agenda item 5, Status and Application of the Five United Nations Treaties on Outer Space, this afternoon.

Information of the activities of international intergovernmental and non-governmental organizations relating to space law (agenda item 6)

Distinguished delegates, I would now like to begin our consideration of agenda item 6, Information of the Activities of International Intergovernmental and Non-governmental Organizations Relating to Space Law.

Under this agenda item, international intergovernmental and non-governmental organizations were invited to report to the Legal Subcommittee on their activities relating to space law. Delegations will have before them the report received from international organizations contained in document A/AC.105/C.2/L.278 and Addendum.1 as well as Conference Room Paper 3.

There are no speakers on the list.

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

I see none.

We will, therefore, continue our consideration of agenda item 6, Information on the Activities of International Intergovernmental and Non-governmental Organizations Relating to Space Law, this afternoon.

Technical presentations

Distinguished delegates, I would now like to proceed with technical presentations. Presenters are kindly reminded that technical presentations should be limited to 20 minutes.

I give the floor to the first presenter, Mr. Rabi El Majidi of Tunisia, who will make a presentation on Tunisian Outer Space Legislative Arsenal.

Mr. R. EL MAJIDI (Tunisia) (*interpretation from French*): Thank you very much Chairman. On behalf of the Tunisian delegation, I would like to congratulate you on your election to the head of this Subcommittee.

And now I am going to be presenting my statement which is on the status of Tunisian legislation on outer space. I would like to point out that, to start

off with, we have based our development model on the promotion of human resources in all fields and we have taken care that all citizens should have the benefit of access to communication technologies, information technologies and knowledge. And this is why our Tunisian State has allocated significant budgetary resources to properly promote scientific research in our country.

We are also interested in the knowledge of outer space as a whole and this has been encouraged in our country since 1957 actually. We are interested in the peaceful use of outer space ever since we launched our first satellite that year and then we set up the National Centre on Outer Space in 1984 and the National Centre on Remote Sensing in 1988. We also were interested in ensuring global presence in all the international congresses and United Nations conferences of the United Nations in this regard. And Tunisian scientific associations have made a remarkable contribution to the activities of the IAF, the International Astronautical Federation, as well as the IAA and the IISL. We have always been very active in the debates having to do with the various issues concerning the development of distance learning, TV educational programmes, for example, tele-medicine, telecommunications and other space technology applications as relating to economic development.

We indeed have ratified three of the five treaties of the United Nations on outer space and here I am referring to the first treaty we ratified, this was in 1967, the second one was ratified in 1970, the Rescue Agreement, and the third one, the Liability, was ratified in 1973. And we would like to specify that pursuant to Article 32 of our Constitution, treaties ratified by the President of the Republic and approved by the Chamber of Deputies have precedence over law.

We have also ratified a certain number of treaties having to do with outer space, the use of outer space and exploitation thereof. These treaties, for example, have to do with the uses of outer space, treaties having to do with organizations, having connections with space activities.

I am just going to be referring to some examples of these treaties on outer space uses. For example, I can refer usefully to the International Convention on Telecommunications which we ratified in 1975, the Arab Union of Telecommunications Convention, the Agreement which was agreed between two Arab telecommunications units which was ratified in 1987 by us. You see, for example, that we also have been active in organizing and ratifying bilateral and regional conventions, be they with international

organizations, regional organizations or other structures.

As for the other category, the treaties having to do with the organizations connected to space activities, here there was the Convention of the Arab Outer Space and Telecommunication Union, also the Convention establishing the international organization on maritime telecommunications, by INMARSAT, this we ratified. The Headquarters Agreement to conclude between Tunisia and the Radio Broadcasting Union of Arab States. We also ratified and also the Convention of Telecommunications of the ITU, was ratified by us in Tunisia in 1991. These are just some examples. My statement has been disseminated to the distinguished delegates so I will not read out the entirety of it.

As for national legislation, the Telecommunications Code was enacted in 2001, amended and supplemented in 2002 and 2008 and we also have established a Code. There are two main bodies regulating the sector of telecommunications in Tunisia and that is the National Agency, that is the first one I am going to be dealing with, the National Frequencies Agencies. This ensures the following missions. The development of the National Plan on Radio-Electric Frequencies. This is a Plan which was already adopted in 2002 and the management of radiofrequencies is also regulated.

We control the technical conditions for radio-electrical equipment, the protection of the utilization made of radio-electric frequencies and the control of utilization of frequencies pursuant and conformity with the authorizations granted in the registrations of applications by national bodies.

As for the national body on telecommunications, this was also set up by the Law of 2001. This is intended principally for the following activities. It is mainly supposed to be ensuring the proper management of national plans on digitalization and addressing, it is supposed to be controlling proper observance of legislative provisions and regulations within the field of telecommunications and network operations.

Pursuant to our national texts, in Tunisia we have very specialized national bodies. There was the National Commission on Outer Space which was set up by Decree in September 1984, as amended by Decree of 1993. It picked up its activities as from February 2000 and basically it is doing the following work. One of the main activities which it has been assigned as per its functions is to come up with proposals for national policy with regard to outer space and the use thereof.

Secondly it is supposed to focus on preserving economic, social, cultural and strategic interests that we may have in outer space and it is also intended to ensure the promotion of scientific, technological capability and research capability in the field of outer space.

The second national structure which was recommended to be established by the bodies that I referred to is the National Centre for Cartography and Remote Sensing, Mapping and Remote Sensing. This was created by a law in 1988 which indeed set it up and established its duties and functions. It is essentially intended to draw up basic maps, marine maps, space maps, outer space maps, thematic and CD maps and plans. It is supposed to indeed also ensure air activities over the entirety of our national space and it is supposed to collect, store and archive these data properly. It is also supposed to be using space technology and remote sensing in order to run up studies for the purposes of national defence and to promote the socio-economic development of the country and mapping to support that.

The third body is the National Institute for Meteorology. This was set up in 1974 and it is intended to basically meet the general requirements as for the climatological and weather forecasting requirements of our country. It is supposed to contribute to setting up sustainable factors for the development and participation in environmental sustainability and protection programmes to protect nature, to promote the quality of life, to contribute to the protection of persons and of property and to protect them as against the risks which may be caused by natural and manmade disasters.

The other bodies, the National Remote Dissemination Office and Bureau. This was set up in 1993 to ensure the dissemination of radio programmes and TV programmes to set up, operate, maintain and ensure the outreach of radio and TV programmes networks and systems as a whole. It is also supposed to do studies as well as promote cooperation with foreign entities in its field.

With all of these sectoral texts that I have referred on outer space and the texts of the regulations of some of our specialized structures, we have set certain lines of promising endeavour for our country, our perspectives as we term them, our prospects. Tunisia does not have a definition of its own to delimit outer space and this definition of air space is in the definition of the territorial definition of our Republic in the treaties concluded with our country's brothers and friends and we believe that outer space is something

which should be delimited and discussed with the discussions which are ongoing in meetings that our Centre engages in.

We believe that this will in the long term be able to properly collect all of the stakeholders views on the delimitation and definition texts of outer space and we believe that it is necessary indeed to very regularly review this issue of the delimitation of outer space. It is necessary for us to properly integrate state-of-the-art knowledge into these issues. We believe indeed that it is certainly timely to examine the question of the issue of delimitation of air space and of outer space, given the complete and exclusive sovereignty exercised by any and all States over air space are over its national territory and outer space must be explored and used freely by all States without any discrimination and this on conditions of equality in pursuant to international law. Tunisia is always very strict in its observance of its international obligations. We amend and align our national legislation as necessary to make sure that it is in synch with our international obligations. Indeed some of these legislative aspects of ours need considerable work and modification occasionally.

We have, over the past three decades, indeed specially stressed the establishment of adequate structures in the acquisition, exploitation and the dissemination of space data. We created the CNEEA, the National Commission on Outer Space in 1984 recommending the creation of the National Centre on Mapping and Remote Sensing, the CNCT, and pursuant to this certain strategies and national plans have been proposed to adapt our legislation, align it with international conventions and obligations to ensure proper harmonization. And given the probable evolution of space activities, Tunisia, as represented by the CNEEA, will be indeed vigilant in proposing and executing all measures intended at furthering the protection of the environment and of outer space, to promoting and developing scientific and technological competence and this by ensuring the proper training of specialized staff, the promotion of research and studies in this field. We will seek to research the best practices and the development of the means to ensure implementation of space technologies and the Tunisia legal arsenal is certainly going to be enriched, enhanced and developed with new texts being incorporated which are going to be aligned with the developments and the evolution which is taking place in the field relating to the utilization of space applications and the adherence of Tunisia to COPUOS will be contributing to the realization of this goal which will be benefiting the proper and sound exchange of experience amongst member States. Law is constantly seeking to follow a pace, the constant

scientific and technological evolution and developments which are emerging and our national proper legislation indeed has to be the fruit of international cooperation within bilateral and international frameworks. We have thus endowed ourselves with the proper texts, the proper institutions and now we are ready to properly cooperate with the international community at large in doing work to properly ensure peaceful exploitation of outer space.

Thank you very much for your attention.

The CHAIRMAN: Thank you Mr. El Majidi for your presentation.

Is there any delegate who has questions for the presenter?

I see none.

I now give the floor to Mr. Wolfgang Schneider of Germany who will make a presentation on "Satellite Data Security Act".

Mr. W. SCHNEIDER (Germany): Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, it is a great honour for me to have the opportunity to share a few thoughts on satellite data security policy with this Committee.

Satellite data security policy is just a very small part of any space legislation and it is also only a very small part of the data policy but we had conditions in Germany that meant that we had to regulate that on more or less on 2007. I just want to explain a little bit the national background for that. The technological advances in satellites, in sensors as well as in data processing, give us the ability to generate data with a very high information content and I think there is no doubt that under very certain circumstances, this type of data could generate some risk. This high information content is one hand due to the high spatial resolution of the data but not only. I think it is also the spectral coverage, spectral resolution, think about thermal infrared sensors or what we call hyper-spectral sensors. It is also about special features like active sensors like radar or lidar.

In Germany we had the very specific situation that the TERRASAR-X radar satellite, which is a very capable Earth observation satellite, was launched in June 2007. The Rapid Eye Satellite Constellation was launched in 2008. The TANDEM Satellite will be launched in this year and, of course, there are even more capable next-generation systems already in preparation. All these systems will be used in

commercial applications as well as scientific applications so it is a combination of the two is the typical use.

We have set up a National Data Security Policy and implemented that with the German Satellite Data Security Act and an additional by-law. The two major purposes are mainly to foster the civil use and the commercialization of remote sensing data by, first of all, maximizing the dataflow to scientific and commercial users and to create legal certainty. So these two facts that we create legal certainty, we feel that really could help us to maximize the dataflow into scientific and commercial users even with the highest possible and highest capable systems which are available today. But at the same time, of course, we need to safeguard the security and foreign policy interests, of course, of Germany, of EU, NATO and friendly or allied countries and we have to protect the peaceful co-existence of nations. So the law which implements this policy became effective in 2007 and the additional by-laws and regulations in 2008. They mainly the by-laws define terms which are defined in numbers and lists so basically it is the definition of the high-grade remote sensing system and the so-called sensitivity check which is a primary concept in our law.

The area of application of the law is, by nature, quite complex but I will try to roughly summarize it. It is applicable to German satellites, satellites operated by German nationals or legal persons, as well as satellites operated from within the Germany territory, however, only to non-military satellites and also to what we call high-grade satellites. The definition of high-grade in itself is again the ability to generate data of particular high-information content and intentionally we use the word "high-information content" to avoid high resolution because we feel there is much more than just the high resolution. And it is limited to the first time or primary marketing and dissemination which means that the Act will effect or it will have a strong effect on the primary data distributed but not typically on the resellers or remote sensing service providers value-adding firms. It was quite important to make sure that you limit the effect to what really needs to be done. Saying that, it does not mean that there cannot be some indirect effect to downstream customers. Of course, this can be the case.

The law itself covers most important parts of the remote sensing so the satellite itself, the commanding of the satellite which basically is the ground station and the up-link. The same is true for the typical down-link of the data. You have the satellite down-links, its images to a central processing station.

This goes to the user. I am sorry for having the names in German. That really goes then to the users and requests by the user could generate a command which then goes again in the up-link but there is a particular complication in remote sensing. Typically, you often have for larger customers you also have the possibility that there is a direct down-link to the customer. So the Remote Sensing Data Policy needs to be able to cope with all of that.

I tried to summarize just without going into detail. If there are questions, I am happy to answer them in any depth and detail but just for this forum, the central part of the Act is basically a procedure for distributing the data.

In addition, we have some requirements for the licensing and obligations and there are a few regulations under company law concerning the operators of a satellite. But again, the main and the central part, the real core element is a procedure of how to distribute the data and I just try to summarize that in this viewgraph. So you have the operator who has a licence and who operates the satellite in the blue box. You have the data provider who is also licensed and has to operate in this blue box and as soon as you try to move the data out into the world, if you try to disseminate that, that is really the mechanism where you have the fact of the law.

The dissemination, the procedure I just mentioned for the dissemination is implemented in a two-layered approach. We feel, with the experience we now have since about two and a half years, is that is quite effective. This two-layered approach is first of all what we call a sensitivity check, that is a pre-defined procedure which is performed individually on a case-by-case basis for any individual transaction. It is performed under the full responsibility of the data provider. That is quite interesting because if you give that to the data provider, it means they can do their own checks but that is the reason why they get a licence and that is the reason why you routinely go to them and inspect them. There are pre-defined procedures. There is no human intervention in that and there are, of course, requirements to document and do record what they did because, of course, you want to send them an inspector from time to time.

The idea of this two-layered approach is basically in the case where you have in the sensitivity check the result, it is not sensitive, the data provider only has to record what he did but he is free to deliver the data. In any other case, he is still not, it is still not forbidden to distribute the data, it just means he needs a governmental permission and for that we have a

governmental authority installed which is called in Germany BAFA.

That is basically exactly the same thing in a different viewgraph. It first of all means you first have the sensitivity check. If you are on the green side, you can disseminate. The only thing you have to do is to record to be sure that it can be inspected at the end of the day. If it is red, it just means you need a governmental permission to do that. And, of course, then you have the typical results which are possible. Either you get a permit to deliver or permit under conditions or probably a ban to deliver. At the end of the day it turns out that in the vast majority of all cases you get, you end up somehow in the green area either by directly being non-sensitive or by being sensitive but get a permit to deliver. It is quite obvious, of course, there are only a few areas or a few cases where you have a real risk and the only thing you want to do with the regulation is to remove the risk.

What is examined in the sensitivity check, and that is quite important, again it is the information content of the individual data product. More than just resolution, it includes something like the mode of operation of the sensor and how the data is being processed. But in addition, things which are related to the transaction, to the individual transaction like the target area which is represented by the product, the time period when between the generation of the time of the data and the delivery of the data products or the time lag, how young is the data, or probably even the time, that the point in time when the data is generated. Of course, the ground segment to which the data is transmitted although this has only a very limited effect, after two years of operation we know that this is of minor importance and the individual customer is taken into account. All that flows in some way into the sensitivity check and what we do, you have to mix all those parameters and we do that by algorithmic definition that combines the parameters by combining threshold values and lists. Really interesting is probably only metadata is required so that is very important. You cannot really judge the dataset by just looking at the dataset because then you get lots of interpretation, discussions, so we just say the metadata is decisive at the end of the day. This is also important because remote sensing systems you often are in the situation that you do not have the data at all because you want to generate a command to image a specific area and to down-link it somewhere else so you never see the data on your own. So the judgement is made on the metadata and what is quite important, if you do that in such an algorithmic definition, which by the way, is quite an effort but nevertheless, it can be executed automatically and that means it is fast and

cost-effective which is quite important for remote sensing in general because there you want to do commercialization.

With my last slide, I want to show a little bit our experience and the way ahead. We feel there is a need for a constant exchange of experience. This can be done informally. One could theoretically formalize that but probably you would discuss that for a long time so we feel there is a need for informally informing each other. We have some constant exchange of experience with many partners like the European Union, the US, the Canadian, the Japanese colleagues and many others. The reason for that is we want to achieve the same level of regulation despite of different regulation mechanisms. There are different national laws. For example, the US and Canada follow something which you could call a licence-oriented approach. We have decided to follow a transaction-oriented approach but at the end of the day what is important is that we feel you somehow need the same spirit and the same level of regulation basically to avoid a race to the bottom. I am not a native speaker, I do not know whether this is really the best word to call it, but the idea behind that is that at the end of the day we keep the same level of security.

If you would allow me to summarize a little bit the statements, I feel that regulation can support and promote state-of-the-art remote sensing systems and commercialization of remote sensing by inviting investment through not regulating the technology but regulating the use of that and make sure that we have responsible re-use of that technology. So you have an invitation of developing and creating the best possible technology.

We also feel that we should not limit our discussion to what could be called the resolution limit. So it is very obvious that you, of course, want to, as soon as you talk about risks coming from data, you will think about the geometrical resolution and you feel the higher the resolution, the more risk could be induced by that data. This is certainly true but we feel this should be combined with more parameters. I mentioned the spectral coverage. Just think about a thermal infrared image that could, at a completely different resolution that could generate more data or different information content.

And my last statement and to close this presentation would be that I am personally convinced that we should inform each other about what we are doing in that regulation and how, what the spirit of that regulation is to make sure that everybody of us has good reasons for implementing the regulation in our

national system in the way how we do that typically. But, at the end of the day, it is on the benefit of us all if we somehow achieve the same level of regulation and that we just use and implement the same spirit of that.

Thank you very much for your attention.

The CHAIRMAN: Thank you Mr. Schneider for your very good presentation.

Is there any delegate who has questions for the presenter?

Please.

Mr. J.-F. MAYENCE (Belgium) (*interpretation from French*): Thank you very much Chairman. I would also like to thank the German delegation's very interesting statement. Right now we are involved in drafting legislation and texts on Earth observation, data management and systems also air-based systems. I would like to put the following question. In all of the legal German provisions and systems that have just been presented especially with regard to data sensitivity issues, has there been any taken into account of international standards and norms, and here, of course, I am thinking in terms of the United Nations statements on remote sensing, when it is a foreign State?

This, of course, is an issue which emerges when the imagery generated, for example, could be of foreign military troop movements on foreign territories. There the sensitivity and the accuracy of the imagery may run in breach of the United Nations remote sensing standards. I would like to know whether in the sensitivity tests Germany has also taken into due account the waivers which have been taken up by the INSPIRE European Directives which are based on the dissemination of space data as pursuant to this European Directive.

Thank you very much.

The CHAIRMAN: Thank you so much to the distinguished representative of Belgium.

Mr. Schneider, I give the floor to Mr. Schneider please.

Mr. W. SCHNEIDER (Germany): Thank you very much for the question. Of course, before we started to draft the law and before we even designed the National Policy, the policy on Satellite Data Security, we had a very thorough search for experience of other nations. We had tried to discuss the topic with

those who already have regulation and we were very grateful that we did receive a lot of reports on experience with existing regulation, for example, from Canada, we got it from the United States. So that was quite helpful to build on experience of others. We did a very thorough investment and a very thorough analysis of existing regulations and existing treaties and other obligations. Of course, the United Nations treaties have been taken into account but there are also less obvious things that have been taken into account. For example, when you go into the more details and the nitty-gritty, for example, of the sensitivity check, then you have to combine on one hand a threat analysis, you do on your own, and that includes a few elements you already mentioned, together with image interpretability guidelines. And, of course, we use national image interpretability guidelines but basically we used international guidelines on this particular thing and we feel that was quite important and quite helpful.

If we come to regulations like, for example, the INSPIRE, then we recognize, of course, we also took that into account. Of course, INSPIRE has a general principle of very open data distribution. It includes a lot of waivers but still there could be security precautions which are always taken into account so I see, at that point, no contradiction between the European regulations on that particular topic and the regulation we did. We really tried to take that into account. And it is just the other way around, the European Commission is in close contact at the moment with us and we try to explain the experience on the two and a half years of implementation we already have at the moment and to make sure that the two things fit together. By the way, also with the German National Space Law which is coming, again this thing, the National Satellite Data Security Policy somehow plucks into the overall space law.

Thank you very much. I hope this basically answers the questions.

The CHAIRMAN: Thank you Mr. Schneider for your presentation.

Are there any questions? OK. I give the floor to the distinguished representative of China.

Mr. Y. XU (China): Thank you Mr. Chairman. Like the previous speaker, China would also like to join to thank the presenter for this very interesting presentation. We have several comments, some of them are questions.

The first one is it is quite interesting that from this presentation, we note the scope of this new law is

quite broad. It is not only limited to German satellites or based on the nationality or territory but also extended to those satellites operated from Germany. It is quite interesting how to decide that the satellite is operated from Germany. The first question.

The second one, it seems to me that the criteria is mostly based on the security consideration, whether it is possible in the future or based on this new law that you will also consider whether the issues of either privacy or any other concerns of the private life or the community is concerned because we can recall at the last session of the Subcommittee, some delegations had a new proposal on their views of the space images data.

The last one is a question or comment, whether there is a correlation between the sensitivity as well as the export control because it seems to me that you have quite a related mandate because the same agenda _____ (*not clear*) the sensitivity exam as well as export control, so whether in practice there will be some correlations between that.

Thank you Mr. Chairman.

The CHAIRMAN: Thank you distinguished representative of China.

I give the floor to Mr. Schneider.

Mr. W. SCHNEIDER (Germany): Again, thank you very much for the question. I will try to answer the two, three questions in series as they appeared.

The first point was why do we also cover not only German satellites but also satellites operated from Germany. The reason for that is quite, we felt it is quite relevant to do that because if you operate a satellite then you can send the command to acquire an image and download it somewhere so the operation of the satellite and the control of the satellite, that is really the key of generating, the potential of generating harm for someone else. So if you have a satellite of any country and someone from Germany would have the possibility to operate that satellite, probably by contract or whatever, then, of course, we want to make sure that he operates the satellite in a way to generate no harm. If the same satellite is operated from the home country, we just assume that the operator will be under the national law of his home country, of course, but he is also out of control of the home country if he just operates it from Germany. We felt there is a clear need to also regulate satellites operated from the German territory.

The second point was the topic on security and privacy. We had long discussions during the legislative process, whether this should be mentioned explicitly. We decided at the end of the day not to mention it explicitly because there are quite strong national legislation on privacy rules and the overall law has been seriously weeded out and made sure that the law itself does not block any aspect from the privacy laws which are already existing. So these are standing side by side and they do not block each other. That was quite important. The topic took some discussion, not only in the process of making the law, which is a very technical thing to just make sure that you do not, that there are not too much correlations, but we also had a parliamentary hearing on that topic and there was, at the end of the day, agreement that these are two different topics. The topic is recognized as potentially irrelevant in addition to the point that we feel it is the combination of existing laws and this law takes perfectly care of that problem. We also had the feeling that it is at least not urgent for the moment because current remote sensing systems have not, at least to our feeling, have not pierced the line where you feel you have a serious violation of privacy rules, as you look to individual persons, that could be of property and things, they are more complex topics which is the reason why we explicitly made sure that the existing laws are applicable.

The last question, if I got it right, was on sensitivity and export control. This is a very important topic and, of course, this is the reason why we aside (assign?) the government authority which is called BAFA in Germany, with that particular topic. This authority handles export control and satellite data security policy or the administration of that law. In fact, it is exactly as you said. What we want to make sure and it turns out that this seems to work quite well, we want to make sure that in case you cannot get the dataset for whatever the reason would be, and we know from the experience of the last two and a half years, that is only in very rare cases that that is relevant but if you cannot get the dataset, then you also cannot get the satellite, that is for sure. It is just the other way around because the satellite, export control of the satellite would mean that you have an uncontrollable ability. We feel the Satellite Data Security Law is generally even a little bit more open. So in general, if you cannot get the dataset, you cannot get the satellite. There is a need for synchronization of these two rules. In that case, in that point, I think that is a very important and very relevant comment and we try to make sure that this is implemented.

Did that cover your question?

The CHAIRMAN: OK, thank you so much Mr. Schneider, distinguished representative of Germany, for a very good presentation and explained the answer of the question.

Are there any questions.

OK, the distinguished delegate from India. I give the floor to you for your question.

Mr. V. GOPALAKRISHNAN (India): Mr. Chairman, thank you. We understand that there is no specific limit is fixed on the resolution of data. It is correct, as part of the sensitivity check, how it is managed? Is there any other method by which this is managed? Can some clarification be given by the distinguished delegation of Germany?

Thank you.

The CHAIRMAN: Mr. Schneider, I give the floor to you.

Mr. W. SCHNEIDER (Germany): Of course, the resolution plays a role, as I explained. We have the combination of a whole set of parameters that goes into the sensitivity check. I mentioned in my viewgraph the information content of the individual data product. And if you try to unfold the term "information content", then, of course, you come to resolution and there is not a resolution limit but a combination of resolution and other parameters. I am happy to explain that in any detail. It is probably not the right floor here to do that in that length but what we do is we combine the resolution with the spectral coverage with the spectral resolution. For example, if you have, I mentioned the topic of the thermal infrared, they have a different resolution value than you would have in the panchromatic or in a multi-spectral system. This somehow refers to the image interpretability which is laid down in some international rules so you combine the flat analysis and you end up in a combination of parameters and limits that are, by the way, published. So we have them and so we are open to share them and I am happy to explain that in any detail to everybody so feel free to just get in direct contact with me. We have a detailed explanation. But, yes, if you combine at very high resolution with a critical target area and an unknown recipient of the data combined and probably with a very short delivery time, then you might be sensitive. That could lead to such a situation. In practical terms, if I may add from the experience we have in the last two years, in practical terms, it turned out in addition to the resolution, the

delivery time is one of the really critical parameters that is related to security.

The CHAIRMAN: OK, thank you so much to the distinguished representative of Germany.

Are there any questions please?

I see none.

Again, thank you so much to Dr. Schneider, the distinguished representative of Germany for a very good presentation.

Distinguished delegates, I will shortly adjourn this meeting. Before doing so, I would like to remind delegates of our schedule of work for this afternoon.

We will meet promptly at 3.00 p.m. At that time, we will continue our consideration of agenda item 4, General Exchange of Views, item 5, Status and

Application of the Five United Nations Treaties on Outer Space, and item 6, Information on the Activities of International Intergovernmental and Non-governmental Organizations Relating to Space Law.

At the end of the Plenary, there will be one technical presentation by a representative of Tunisia on "Space Activities of the Tunisia Centre for Cartography and Remote Sensing".

Are there any questions or comments on this proposed schedule?

I see none.

Therefore, the meeting is adjourned until 3.00 p.m.

Thank you so much for your attention.

The meeting adjourned at 12.18 p.m.