

**Committee on the Peaceful
Uses of Outer Space***Unedited transcript*574th Meeting

Tuesday, 12 June 2007, 10 a.m.

Vienna

Chairman: Mr. G. Brachet (France)*The meeting was called to order at 10.14 a.m.*

The CHAIRMAN (*interpretation from French*): Ladies and gentlemen, distinguished delegates, good morning. I now declare open the 574th meeting of the Committee on the Peaceful Uses of Outer Space.

This morning we will continue our consideration of agenda item 7, report of the Scientific and Technical Subcommittee on its forty-fourth session. We will continue and hopefully conclude our consideration of agenda item 8, report of the Legal Subcommittee on its forty-sixth session and item 9, spin-off benefits of space technology: review of current status. We will also begin our consideration of agenda item 10, space and society and maybe, if we have time, other matters, item 13.

At the end of this morning's meeting there will be three technical presentations under agenda item 10. Mr. Lothar Beckel, representative of Austria, will make a presentation entitled, A new paradigm on geographic education: the ESA school. Then, Mr. Osama Ammar and Mr. Marwan Koudmani of Syria will make a presentation entitled, under agenda item 11, Experience of General Organization of Remote Sensing. The third presentation will be made by Mr. Martin Kukla and Mr. Marcus Rennhofer of the Space Generation Advisory Council (SGAC), on Space Education without Borders.

I would also like to remind you that a conference entitled, Radiation Exposure to Aircraft Crew due to Space Weather Effects, will be held today from 9 a.m. to 6 p.m. in the UNIDO Boardroom on the

fourth floor. It is organized by the Austrian Research Centre in cooperation with the Office for Outer Space Affairs and you are warmly invited to attend.

Ladies and gentlemen, distinguished delegates, I will now continue our consideration of agenda item 7, report of the Scientific and Technical Subcommittee on its forty-fourth session.

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

**Report of the Scientific and Technical
Subcommittee on its forty-fourth session
(agenda item 7)**

Ms. N. ORIHUELA-GUEVARA (Venezuela, Bolivarian Republic of) (*interpretation from Spanish*): Thank you very much, Mr. Chairman. Mr. Chairman, the Government of the Bolivarian Republic of Venezuela is committed to maintaining international peace and security and strengthening cooperation among countries of the world. We reiterate our respect for the legal principles underlying the exploration and utilization of outer space for peaceful purposes and would like to emphasize the following.

First, the principle of free access to outer space under terms of equality, favouring all States without any kind of discrimination, should be outside any assessment of the degree of technical and economic development of countries. We promote equitable and rational use of the various orbital positions that accommodate artificial satellites.

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.



Second, the principle of the non-appropriation of outer space, including the Moon and other celestial bodies. These cannot be the object of ownership by States, nations, for proclaiming sovereignty, occupation or in any other form.

Third, we promote non-militarization of outer space.

Mr. Chairman, based on these principles, my delegation joins those delegations that pronounce themselves in favour of approving guidelines for the reduction of space debris, thus, improving the opportunities of countries that traditionally have had little scientific and technological involvement in this area. At the moment, we are paying great attention to the subject and particularly the benefits for development in the years to come. We understand that some countries have, for four decades, used outer space, making use of orbits, occupying them with their space programmes, not always destined to benefit humanity. At the moment we are concerned on behalf of those countries that have not benefited in terms of developing their technologies and would like to emphasize the need to promote a multi-polar way of developing outer space and international relations in that regard.

This delegation reaffirms its declaration in the Scientific and Technical Subcommittee and call for specific recommendations in terms of promoting this work.

With regard to the SPIDER platform, this delegation welcomes the confirmation of the commitment of States to making this platform work and we believe that the presence of the People's Republic of China as one of the countries hosting this organization's network demonstrates that the map of this space programme is expanding, it is becoming a truly international effort. Thank you very much, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): I thank our distinguished colleague from the Bolivarian Republic of Venezuela and I would like to thank you, in particular, for the support you have extended to the conclusions drawn by the Scientific and Technical Subcommittee of COPUOS.

I have no further speakers on my list for the moment, under agenda item 7. If no other delegations wish to speak under item 7, at this time, we will suspend this discussion and will continue our consideration of item 7, particularly the SPIDER

platform and related issues this afternoon and tomorrow morning.

Ladies and gentlemen, distinguished delegates, we will now resume and hopefully conclude our consideration of agenda item 8, report of the Legal Subcommittee on its forty-sixth session.

Under item 8 we have several speakers on the list. The first delegation on my list is our distinguished colleague representing Nigeria.

Report of the Legal Subcommittee on its forty-sixth session (agenda item 8)

Mr. A. OTEPOLA (Nigeria): Thank you Mr. Chairman. My delegation wishes to reiterate Nigeria's firm commitment to secure universal adherence of States to the United Nations treaties on space law. It is important to note that, since the inception of COPUOS, one of its major achievements was the development and adoption of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies. This year we mark the fortieth anniversary of that Treaty's entry into force. Nigeria is presently a Party to three of the four subsequent treaties on outer space and we are at an advanced stage of acceding to the fourth, namely, the Convention on Registration of Objects Launched into Outer Space.

Mr. Chairman, COPUOS, of which 15 members are African States, is at a very important stage of its work in terms of the five main treaties on outer space. For developing countries, like Nigeria, efforts must be supported and sustained to ensure active participation so as to demonstrate their commitment to the promotion of the existing United Nations treaties on outer space. As part of this effort, Nigeria co-hosted the fourth in a series of United Nations space law workshops and also hosted the first African Space Leadership Conference on Space Science and Technology for Sustainable Development. This commitment was also reiterated more recently at the African Regional Conference of Ministers of Science and Technology, held in Addis Ababa in January 2007.

Mr. Chairman, my delegation is convinced that the provisions set forth in this multilateral legal instrument create a number of obligations which Nigeria, like all States, seeks to strengthen by codifying them in our domestic laws relating to the conduct of space activities for peaceful purposes. We recognize the need for harmonization of domestic

legislation with international treaties. We therefore reiterate our conviction that, though the space law treaties and resolutions provide the minimum framework for the conduct of space activities, there is a need to expand the universal understanding of the scope, content and application of space law. It is in this regard that my delegation expresses its interest in the _____ (*inaudible*) countries deliberations on the questionnaire on possible options for future development of international space law, including the discussions regarding a comprehensive convention on space law. Thank you.

The CHAIRMAN (*interpretation from French*): I thank you for your statement on behalf of the delegation of Nigeria. I note with satisfaction the active support extended by Nigeria to international conventions and outer space law.

I now call upon the distinguished representative of the United States, Mr. Ken Hodgkins.

Mr. K. HODGKINS (United States of America): Thank you, Mr. Chairman. My delegation has noted previously the positive developments in revitalizing the agendas and methods of work of COPUOS and its subcommittees. The last session of the Legal Subcommittee demonstrated once again the encouraging results that have emerged from our efforts. Under the able leadership of its chairman, Ambassador Raimundo González of Chile, the Subcommittee produced a number of highly useful results.

This year marks the fortieth anniversary of the entry into force of the Outer Space Treaty so it is only fitting to note that COPUOS and its Legal Subcommittee have a distinguished history of working, through consensus, to develop space law in a manner that promotes space exploration.

The Legal Subcommittee played a key role in establishing the primary outer space treaties, the Outer Space Treaty of 1967, the Rescue and Return Agreement and the Liability and Registration Conventions. Under the legal framework of these treaties, space exploration 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.

Notwithstanding the continued relevance of the space law instruments many States have not accepted key treaties, including some members of COPUOS. The United States has encouraged the said Subcommittee to invite States to consider ratifying and

implementing the four main 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 nation's laws to implement them.

We were pleased to learn, at the most recent session of the Legal Subcommittee, that some additional States have acceded to several of the outer space treaties and that others intend to do so in the future.

At the most recent session of the Legal Subcommittee some States called for the negotiation of a new comprehensive convention on outer space. It is my delegation's view that such an approach would be counter-productive. The principles contained in the space law instruments establish a framework that has encouraged the exploration of outer space and benefited both space-faring and non-space-faring nations. It is important that we not lose sight of how much has been, and continues to be, achieved for humanity's common benefit within this framework. Articles I and II of the Outer Space Treaty establish that the exploration and use of space is to be carried out for the benefit and in the interests of all peoples, that outer space exploration and use are open on a non-discriminatory basis, that there is freedom of scientific investigation in outer space and that outer space is not subject to national appropriation. The United States fully supports these principles and believes that the Subcommittee should undertake activities that support the continued vitality of these principles. The United States remains convinced that to entertain the possibility of the negotiation of a new comprehensive space law instrument might undermine these principles in the existing space law regime.

At its most recent session, the Legal Subcommittee concluded its work on the practice of States and international organizations in registering space objects. We wish to congratulate the Chairman of the Working Group on this item, Dr. Kai-Uwe Schrogl of Germany, for his superb leadership in bringing the multi-year workplan to a highly successful conclusion.

We also welcome the recommendation of the Subcommittee to add to its agenda next year the item to be considered under a multi-year workplan, entitled, general exchange of information on national legislation relevant to the peaceful exploration and use of outer space. We believe this will be an extremely interesting topic that will provide insight as to how States oversee their governmental and non-governmental activities in space.

In addition, we are pleased with the Committee's recommendation to consider capacity building in space law during next year's meeting. Member States and observers will now have the opportunity to exchange views on efforts underway, at the national and international levels, to promote a wider appreciation of space law. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you very much Mr. Hodgkins for your statement. We are now going to be giving the floor to the distinguished colleague from Italy, Mr. Sergio Marchisio.

Mr. S. MARCHISIO (Italy): Thank you very much, Mr. Chairman. The Italian delegation is pleased to join other delegations in congratulating the Legal Subcommittee for the outstanding results achieved during its forty-sixth session, under the excellent chairmanship of Ambassador Raimundo González-Aninat. Our satisfaction with regard to the work accomplished by the Legal Subcommittee and its three working groups, respectively, on status and application of the five United Nations treaties, the definition and delimitation of outer space and the practice of States and international organizations in registering space objects.

Mr. Chairman, concerning the practice of States and international organizations in registering space objects. My delegation followed with particular interest the debate, within the Legal Subcommittee, which led to the adoption of the elements of conclusions as the basis for a draft resolution. We congratulate Mr. Kai-Uwe Schrogl from Germany from his remarkable guidance. In this line, we welcome the consensus reached yesterday, within the Main Committee, to transform these elements into a draft resolution to be submitted to the General Assembly through the Fourth Committee. We consider this document as a useful tool for member States and international organizations in implementing the Convention of 1975 and in harmonizing their practices in registering space objects. We are also convinced that it will lead to increased universal accession to, implementation of and compliance with, the Registration Convention.

The Italian delegation endorses the recommendation that the mandate of the Working Group on the Status and Application of the five United Nations Treaties on Outer Space be extended for one additional year. The debate realized, under the chairmanship of Mr. Cassapoglou, proved to be useful as to the universal acceptance of the United Nations

treaties, slowly but increasing year by year, thanks to the information provided for by the Legal Subcommittee on the benefits of adhering to these treaties.

We also welcome that the Working Group will focus on the benefits of becoming a Party to the Moon Agreement of 1979. In general, we wish to join those delegations that, during the Legal Subcommittee's sessions, mentioned the activities of the Office for Outer Space Affairs as directly contributing to the progress made towards a universal acceptance of the treaties.

The Italian delegation notes with satisfaction the fruitful debate that took place within the Working Group on Matters Relating to the Definition and Delimitation of Outer Space and wishes to congratulate its chairman, Professor Monserrat Filho from Brazil, for the excellent new impetus given to this item.

We also support the decision of the Legal Subcommittee that the item concerning the examination and review of the developments concerning the draft protocol on matters specific to space assets to the Capetown Convention should remain on its agenda. As you aware a special joint meeting of government and industry representatives will be held in New York from 19-20 June this year, to consider the outstanding key issues remaining to be dealt with in respect of the planned space asset protocol and most appropriate means of bringing the said protocol to timely completion.

The intention of the joint meeting is to try to find solutions that adequately respond to the practical needs of the space community while being acceptable to the interested governments. Of particular relevance are the extent to which the preliminary draft space asset protocol should provide limitations on the exercise of creditor's remedies in respect of space assets performing a public service and the criteria for the identification of space assets to be employed in the protocol as well as the proposed revisions to the preliminary draft with regard to the definition of space assets and the treatment of debtor's rights and related rights.

The Italian delegation believes, on the one hand, that it is important to address these complex issues in a balanced manner that reflects and seeks to accommodate different views on these topics. On the other hand, it believes that the established international legal regime of outer space as well as national legislation of space assets and activities should

constitute the mandatory framework within which private transactions should develop and flourish.

My delegation would like to congratulate Professor Kopal under whose chairmanship the informal consultations on proposals to the Committee for new items to be considered by the Legal Subcommittee at its forty-seventh session took place.

We welcome the adoption of two new agenda items. Firstly, the new one-year period agenda item on capacity building in space law taking into account the interests of developing countries. We are pleased that the adoption of this new agenda item followed the IISL/ECSL symposium, held on the same subject, at the last session of the Legal Subcommittee. Within that, further elaboration of this subject may pave the way to broaden the knowledge and the development of space law which is, indeed, under the mandate of the Legal Subcommittee. We look forward to contributing to the deliberation of the Legal Subcommittee under this new agenda item.

The second new agenda item, general exchange of information on national legislation relevant to the peaceful exploration and use of outer space, will be under a four-year workplan and with a working group to be established in the second year. We support this decision, fully convinced that its discussion will give all COPUOS member States the opportunity to keep abreast of the rapid developments which are taking place within their internal legal systems.

Finally, let me also express our appreciation for the topic retained for the next IISL/ECSL symposium, legal implication of space applications for global climate change with the aim of a possible inclusion of the subject, as a single issue item, on the Legal Subcommittee agenda in 2009. We believe that the Legal Subcommittee should provide every effort to contribute to the international debate also taking upon space law on the critical subject of climate change.

In conclusion, the Legal Subcommittee remains the major forum of universal _____ (*inaudible*) to address and solve legal issues arising from space operations. In line with the views contained in document A/AC.105/L.268 on the future role and activities of the Committee on the Peaceful Uses of Outer Space that you submitted for our consideration, Mr. Chairman, it is important for the Legal Subcommittee to remain attentive to the evolving needs of the space-faring nations as well as the increasing expectations from nations that do not

have active space programmes but need the benefits from space activity. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you, Mr. Marchisio, for your statement on behalf of the Italian delegation. I also believe that I can say that you are playing a very important role in the UNIDROIT discussions, including the discussion that took place last week in New York and we certainly wish you the best for positive results from that discussion.

Now I would like to give the floor to the distinguished representative of India, Mr. Radhakrishnan.

Mr. RADHAKRISHNAN (India): Thank you, Mr. Chairman. The Indian delegation is very pleased with the progress and significant achievements made during the forty-sixth session of the Legal Subcommittee and we consider that the development of space law is crucial to the orderly and organized exploration of space for peaceful purposes for the benefit of mankind.

The Indian delegation considers the contribution of the Legal Subcommittee, over the years, in developing international legal regime for outer space is very important. In our view, the Legal Subcommittee occupies a leading and prestigious role in evolving and safeguarding the entire body of international space law which was founded, so far, on ethical principles. We reaffirm that the five United Nations space treaties, evolved through consensus and accepted by a large number of countries, constitute the cornerstone of international space law.

The review of the status and application of the five United Nations treaties on outer space therefore is an important subject to encourage adherence to these by the States which are yet to become Parties to that. The Indian delegation is of the view that the GSO is an integral part of outer space and is thus governed by the outer space treaties. The continuing debate on this subject and on the subject of the definition and delimitation of outer space is crucial to arrive at common understanding.

We _____ (*inaudible*) announced about an initiative undertaken by the Indian Space Research Organization (ISRO) towards capacity building in the field of international space law. We continued and strengthened that initiative in 2005 and 2006. ISRO continues to support the conduct of national events by the National Law School of India, Bangalore, for the selection of one team and sponsored the winning team

for participation in the regional round of the Manfred Lachs Moot Court competition being held in Sydney. It is our pleasure to inform this Committee that this year, the number of participating teams of students, for the current year, is 15 and the finals were successfully held on 25 March 2007.

The proceedings of the third Space Law Conference, jointly sponsored by IISL and ISRO, held at Bangalore from 26-29 June 2005 was brought out in a printed form and disseminated to various interested parties and educational institutions free of charge.

The Indian delegation is pleased to bring it to the kind attention of this Committee that the 56th International Astronautical Congress (IAC) 2007, will be held in India, at Hyderabad, during 24-28 September 2007. Two other very unique events in the annals of space law, the 50th Space Law Colloquium and the 40th year of the Outer Space Treaty, are also coinciding with this mega event.

The Indian delegation would like to reiterate its commitment to the use of outer space for peaceful purposes in the common interests of mankind. We support the development and continuous evolution of the rule of law for the peaceful use and exploration of outer space so as to ensure benefits to all countries. We are of the view that the sovereign right of every country to have access to space and the opportunity to utilize space for development programmes should be well respected. It is in this context that the safety and security of space assets should be well preserved for better prosperity of mankind. We endorse the report of the forty-sixth session of the Legal Subcommittee. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you very much Mr. Radhakrishnan on your statement on behalf of the Indian delegation. I would like to thank you for the very active support that you are expressing for the Legal Subcommittee's work and thank you for your reference to the Hyderabad September meeting of the Astronautical Congress.

I would now like to give the floor to the Russian Federation, Mr. Evgeny Zagaynov will be speaking.

Mr. E. ZAGAYNOV (Russian Federation) (*interpretation from Russian*): Thank you very much, Mr. Chairman. The Russian delegation highly appreciates the results achieved at the session of the Legal Subcommittee this year. We believe that the work of the group on the status and the implementation of the United Nations space treaties is of special

importance especially the impetus given to the process of giving them a universal character. We believe that it is necessary not just to speak about the instruments which have been created but also the future prospects for the development of international outer space law. We believe that it is very important to note the decision taken to speak about the problems which have been referred to in the questionnaire on future developments of international outer space law which has been proposed by the delegations of Russia, Ukraine and Kazakhstan.

The implementation of this proposal will allow us to study and analyse the whole range of States' approaches to these issues. We would like to especially note the success scored by the group with respect to the registration of space objects and we would like to indeed congratulate the group leader Kai-Uwe Schrogl and all of us in that respect.

Before the Legal Subcommittee various new promising issues have also been tabled. For example, the issues having to do with the creation of potential in the field of outer space law as well as the exchange of information in national space law. I would like to support the initiation of work on these subjects and we believe that this information, along with the exchange of experience with regard to bilateral and multilateral international treaties, will allow the interested States in developing and evolving national outer space legislation policies.

The fortieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies is certainly a very sound reason to think about the achievements of the future and also about the problems which need to be resolved. It is certainly indicative that, in the future as well, the Committee and the Committee's work is going to be indeed the leitmotiv in almost all of the meetings. The United Nations Committee for the Peaceful Uses of Outer Space Affairs is a unique international forum within which a new branch of international outer space law has evolved in the course of the very difficult discussions, the three United Nations treaties on outer space have been developed and adopted. These are to organize the use of outer space for peaceful purposes and this for the benefit of all mankind.

Nonetheless, in the legal regulation of outer space activities there is some lacunae appearing, new factors such as new space technologies, new non-State players in space activities and its commercialization have evolved and the absence of standards, which are

necessary to organize all these activities in outer space, may result in conflictual and difficult situations which may have a negative effect on cooperation and the future use of space activities in a sustainable fashion. This is why, along with other delegations speaking in this regard, the Russian Federation is in favour of active efforts to codify and progressively evolve international space law. We believe that the most effective way to do this is to develop a comprehensive convention on space law.

Working on this idea will allow us to resolve topical problems such as the delimitation of space, action against debris, remote sensing of the Earth etc. and, at the basis of the convention, we should have the principles and standards of existing international legal space documents. All of the aspects of space activity are interconnected. Space is a very complex, comprehensive system and requires us to have a very comprehensive approach to resolve the problems related to it. The preparation of a comprehensive convention is a very difficult, long haul and it requires a very concerted joining of interests and approach on the part of many States. However, it is indeed objectively indispensable and we believe that it is necessary for us to recognize this. We would once again like to call upon the States Parties to the United Nations Committee on Outer Space to start discussing the legal aspects having to do with the possibility of developing a comprehensive convention on outer space law. Thank you.

The CHAIRMAN (*interpretation from French*): Thank you very much the Russian Federation and Mr. Zagaynov for your statement and your recalling of the proposal of the Russian Federation calling for the development of a comprehensive convention on space activities.

I would now like to give the floor to the distinguished representative of Colombia.

Mr. C. ARÉVALO-YEPES (Colombia) (*interpretation from Spanish*): Thank you very much, Mr. Chairman. We would also like to join the congratulations to Mr. González for his guiding the work of the Legal Subcommittee of COPUOS which we believe is playing such an essential role. Thanks to years of devotion and devoted efforts, the Subcommittee has successfully contributed to the development of space law.

Given the fact that technological progress calls for an adaptation of law, I would like to quote Mr. _____ (*inaudible*) who, in his work, has recalled that the space era has created new relations between

science and technology and law. Given the fact that the first two elements of space law is developing a pace, this is not static this is law and it must keep pace with scientific development. Since 1969 we have endowed ourselves with principles and we must add the principles of equality of treatment which allows for the application of law and the interests of the States which have not achieved the highest level of development

Possibly one of the characteristics of space law is the lesser presence of customary law which gives it its unique nature. There are some experts which refer to this situation with maritime law at the beginning of the twentieth century, we are now recognizing the emergence of space law which is based on the achievements of mankind. We agree that, given the progress of science and technology, there is certainly impact on the development of law and that there is going to be interaction and it is necessary to have fairness govern this. It is necessary to impart a humanistic touch to this because outer space is the common province of all mankind, after all. This is all the more important when we get to the stage of commercialization of space which can risk introducing imbalances in fairness and equity. It is necessary for us to retain a spirit of consensus within the Legal Subcommittee and the way in which we are linking our work to the Scientific Subcommittee as well.

The rule of consensus has allowed us to reconcile our positions at a time where it seemed well nigh impossible to do so and this enabled us to work on the five space treaties and has allowed us also to optimistically view the future and we hope that we will be able to positively assess the link between the scientific, technological and the legal aspects of these issues. This is why we would like to call for this approach to continue to be employed so that the emergence of the private sector, the commercialization of space activities and the new interrelationships between private and public will be properly addressed.

COPUOS will have to take up all these challenges and the Legal Subcommittee will have to as well. Colombia believes that space, as the province of all mankind, as we have in article 67 of the Treaty, is its key principle, the basis of which all can make use of space irrespective of States' developmental levels. This is why the geostationary orbit must be properly addressed and exploited in a rational and fair fashion in order to preserve the interests of the developing nations. This is why the agreement, scored during the thirty-ninth session in this regard, is a very major step forward, this is why we would like to call for more linkage among the various bodies of the United

Nations, especially ITU, this is something we have always stressed.

The agreement, which is one of the main results achieved by COPUOS which is one of the relevant issues and this is something we have also asked to be recorded in the book on the main instruments, is an issue linked to the issue of the delimitation of outer space, this is a work which was guided by Mr. Monserrat Filho.

The other issue, which is of great importance, has to do with the geostationary orbit and the way to ensure rational and fair use thereof, especially given the role played by ITU in that regard. We believe that we have made some progress in this regard but the geostationary orbit needs a *sui generis* regime in conformity with article IV of the Constitution of ITU. This is why we would like to call for this issue to be maintained on the agenda. It is necessary to delimit outer space in this regard we have supported the consensus reached on the basis of the Czech Republic's proposal which states that this orbit has *sui generis* characteristics and must be dealt with accordingly.

With regard to registration of space objects and the use of NPS in outer space, we have also made progress. UNIDROIT in this regard has drawn very important conclusions and we would like to also stress the importance of the meeting to be held in New York on this issue very shortly.

I wanted also to refer to a very important point and that is the activities conducted within institutions specialized in space law. We are convinced that activities of the International Institute of Space Law and the International Centre on Space Law contribute to this work. The symposium is a very good demonstration of this, we would like to congratulate Professor Kopal and Professor Jakowitsch? for their contribution to the organization of this event. We are very happy that these two new themes have been included and this has been made possible thanks to the very effective work of Professor Kopal and particularly with respect to the strengthening of capacities in space law.

In conclusion, Mr. Chairman, we would like to stress the importance of item 4 of the Subcommittee's work and the activities of the group, directed by Greece, on the application of the five outer space treaties. This should be a forum allowing reflection to better determine the legal _____ (*inaudible*) in this regard which will allow for consensus on the obstacles to the universal application

of these treaties enabling us to identify visionary ways to surmount these obstacles. Thank you.

The CHAIRMAN (*interpretation from French*): I thank our distinguished colleague, the representative of Colombia for his statement, for his profound reflection on the issues that continue to challenge us in the area of international space law. I thank him and his country for the great support for the work of the Legal Subcommittee.

Are there any other requests for the floor under agenda item 8, report of the Legal Subcommittee on its forty-sixth session? I see none.

We have thus concluded our consideration of agenda item 8, report of the Legal Subcommittee on its forty-sixth session.

Ladies and gentlemen, distinguished delegates, we will now move on to agenda item 9 and continue our consideration of the spin-off benefits of space technology: a review of current status.

The first speaker on my list under this agenda item is the distinguished representative of Ukraine, Mr. Ventskovskiy.

Spin-off benefits of space technology: review of current status (agenda item 9)

Mr. O. VENTSKOVSKIY (Ukraine): Thank you very much, Mr. Chairman. I would like to make you aware of the fact that, roughly two months ago, to be precise from 18-20 April in Ukraine in Dnepropetrovsk city, which is the country's space capital, a big international space conference entitled, Advanced Space Technologies for the Humankind Prosperity took place. It was devoted to the fiftieth anniversary of the space era and was held under the auspices of the International Academy of Astronautics. The organizers were the National Space Agency of Ukraine, Yuzhnoye State Design Office and Yuzhny Machine Plant. There were about 300 participants which presented roughly 130 papers.

Some very important issues were discussed such as the potential contribution of the rocket space systems into the solution of global problems of humankind such as, creation of anti-asteroid defence, cleaning of near Earth space debris, removal of nuclear waste to outer space and some others. Among the topics for the sessions, the organizers selected the following, modern and future satellite systems for Earth observation, communication, space research and navigation, advanced rocket engines and prospective

propulsion systems, modern rocket space materials and technologies and the methods of their quality evaluation. During the session entitled, space and society, different methodologies and perspectives of space education of youth, distance design via Internet, political, economical and legislative aspects of space exploration were discussed and presented, as far as the issues of international cooperation. We have also discussed the influence space activity has on the social economic development and everyday life of society. In order to give you a flair of the event I have selected several pictures to show you and I kindly ask you, my colleague, to show the slides now.

This is one of the sessions going on, on the advanced space propulsion systems.

Here is the building where the conference was held, it is the building where our National Centre for Aerospace Education of the Youth of Ukraine is located.

This is the conference hall, you can see a number of flags, indeed, there were participants from virtually all the major space countries of the world.

This is a plenary session. We have some very famous personalities such as, Jean-Michel Contant, General Secretary of the International Academy of Astronautics, Mr. Mike Yaremovich from the United States, past president of the International Academy of Astronautics, Jacques Breton from the Arianespace Company, Vice-President, and many others from the European Space Agency, from Roscosmos, JAXA and some other leading space agencies and companies.

This is a press conference which was held in the museum of the National Centre for Aerospace Education of Youth and you can see the real copies of satellites, designed and produced in Ukraine and launched several years ago.

This is a fragment of a gala concert with a Ukrainian flavour.

Virtually all the conference participants expressed a great _____ (*inaudible*) with this event and expressed the opinion and desire that such an event becomes a regular one. I am very happy to tell you that, during the final press conference, the Ukrainian organizers have already announced that in two years time, in April 2009, the next conference with the same title will be held and I invite you to follow our announcements. We expect that by September, at the Hyderabad congress, we will issue the first announcement for the next conference and at the same

time this announcement will be placed on the official website of the International Academy of Astronautics which is www.iaaweb.org.

Just to complete the information, I can tell you that I have passed, to the session secretariat, the abstracts published by the organizers and the selected papers, roughly 15-20, will be published in a special issue of the *Acta Astronautica* magazine, which is an official magazine of the International Academy of Astronautics. So, I invite you to the next event in two years time and we look forward to welcoming all of you in Dniepropetrovsk. Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Ventskovskiy for your statement and congratulations to Ukraine on the success of the conference organized in Dniepropetrovsk in April and thank you also for the invitation to attend this conference that you are planning two years from now.

I am now going to call upon the distinguished representative of Japan, Mr. Yamada.

Mr. H. YAMADA (Japan): Thank you Mr. Chairman, distinguished delegates. On behalf of the Japanese delegation I am honoured to present to you some examples of Japan's spin-off efforts in the field of space technology at this session of COPUOS.

To begin with the Japan Aerospace Exploration Agency (JAXA) has established the Industrial Collaboration Department in order to strengthen the competitiveness of the Japanese space industry and the enhanced space utilization. The Department which is predominantly in charge of the spin-offs, which is technology transfer, various space technologies and patents and the intellectual property accumulated by JAXA for industrial use, is expected to boost the level of cooperation among public, academic and private sectors.

During the last session of COPUOS, Japan introduced a couple of spin-off examples, such as thermal insulation material which was in the _____ (*inaudible*) of the H-IIA launch vehicle and it is going to be a _____ (*inaudible*) as a spray type heat insulation for buildings, blast wave simulation software planned for use during the lift-off of launch vehicles as well as applications to the front carriage of high-speed trains also made an appearance.

Apart from that we would like to offer illustrations of a few upcoming spin-offs. One of note is the general water purification system which will

apply to drinking water with production technology for space. Another notable spin-off is a new type solar-powered street lights which apply the solar _____ (*inaudible*) power generation systems for space.

The general water purification system with _____ (*inaudible*) nanometer sized filters enables the salination of sea-water and _____ (*inaudible*) elimination. The system is beginning to be used where water services are unavailable, as a preparation _____ (*inaudible*) in the case of disasters and medical facilities in regular homes.

Spray type heat insulation for buildings, introduced last year, has attracted attention as a product which aids in global environment protection. It is used to control the generation of greenhouse gases to air conditioning efficiency improvement. These are just mere examples of Japanese space spin-off efforts.

Aiming to reap _____ (*inaudible*) spin-off benefits, JAXA has undertaken various supportive activities such as increasing the promotion of licensing by business academia correlation coordinators who support the commercialization of technology, based on JAXA's licensing promotion system, extending venture business support programmes and opening up JAXA's R&D facilities to private companies in order to support their commercialization plans.

These activities are expected to lead to future generations of successful spin-off results. Japan is of the belief that spin-offs from space technology with advanced economies through the production of new innovative technologies thereby contributing to an improvement in the quality of life. Thank you for your attention.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Yamada for your statement on behalf of Japan and thank you for informing us of these very interesting examples of spin-off applications of space technologies in everyday life.

I am now going to call on the distinguished representative of Italy.

Ms. S. ZOFFOLI (Italy): Mr. Chairman, distinguished delegates. On behalf of the Italian delegation I am pleased to share with this prestigious assembly the Italian Space Agency experience regarding some examples of space technology spin-off and their economic and social benefits.

Spin-off of space technology represents a powerful engine for technological innovation and

_____ (*inaudible*) in both the industrial and services sector. Moreover, spin-off can also achieve social and humanitarian results. It is _____ (*inaudible*) among the objectives of the Italian Space Agency that of fostering and promoting such space technology transfers.

Mr. Chairman, I wish to expose some significant examples of the Italian space spin-off experience. The first case of space technology transfer has a bio-medical application. It deals with an external fixing tool for bone, used in case of broken bones. It has been constructed with the polymeric material which originally had been developed for a space application, namely, Colombus. Such a fixing tool for bones has been giving an unprecedented performance in the process of reformation and growth of the bone callus. Equipped with the telemetry, the external fixing tool for bones in addition permit a drastic reduction in the number of _____ (*inaudible*).

Another case of spin-off, I would like briefly to expose, regards a kind of software originally developed for the control of some space sensors specifically _____ (*inaudible*) MicroExec. This software has been re-adapted for the railway and car transportation and has reached an extraordinary result. It is, in fact, capable of monitoring, with extreme precision and efficacy, a plurality of sensors, TLC GPS receiver home automation and so on, which control the correct _____ (*inaudible*) of vapours and their various electronic tools favouring their vast operation and performance.

Mr. Chairman, let me conclude with the last example of space technology spin-off which is still in the assessment study phase but it is very promising. I am referring to a _____ (*inaudible*) radar named _____ (*inaudible*). _____ (*inaudible*) Aerotransportato Terrestre that should permit access to safe water supply. _____ (*inaudible*) will be based on and make use of the experience gained in the development of the MARSIS and SHARAD Italian sensors for the discovery of underground water on Mars. _____ (*inaudible*) will be devoted to the detection of underground water in arid and semi-arid regions. It will fly over the arid area on board a simple aeroplane. The research is also studying the geological and social economic sustainability of the project.

Mr. Chairman, distinguished delegates. Better than I, you know how the _____ (*inaudible*) is the problem of desertification, especially because of its social impact. Space technology can contribute in the fight against such humanitarian tragedies. As soon as possible Italy hopes to be able to offer this sensor, first of all to African countries.

Before closing I would like to add that to this goal Italy and the Italian Space Agency have also the firm intention to use COSMO-SkyMed data in order to develop applications able to monitor such phenomena and in this way to contribute in the fight against desertification and _____ (*inaudible*). Thank you very much for your kind attention.

The CHAIRMAN (*interpretation from French*): Thank you for your contribution on behalf of the Italian delegation and for the examples of spin-off benefits of space technology that you have cited, particularly of interest are the spin-off benefits of the radar established in the Mars area and the orbital data that are provided, which have benefits for our own old planet.

Would any other delegations wish to take the floor this morning under agenda item 9, spin-off benefits of space technology: review of current status? I see none.

Thus, we have concluded our consideration of agenda item 9, spin-off benefits of space technology: review of current status.

Ladies and gentlemen, distinguished delegates, I would now like to begin our consideration of agenda item 10, space and society.

I would like to remind delegates that in paragraph 44 of its resolution 61/111, the United Nations General Assembly requested the Committee to continue to consider, at its fiftieth session under the agenda item, space and society, the special theme, space and education, which is established as a focus of discussions for the period 2004-2006 in accordance with the workplan adopted by the Committee at its forty-sixth session.

According to this workplan and the agreement of the Committee reached at its forty-ninth session the Committee, at its fiftieth session, will undertake the following actions, develop a specific, concrete action plan for incorporating outer space into education, enhancing education and space matters, expanding space tools for education and ensuring that space-based services contribute to the achievement of the Millennium Development Goals on access to education. The second objective, we should prepare a brief document on the role of space in education as well as the link between space and education for transmission to the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO).

I will now turn to the list of speakers I have under this agenda item. The first speaker on my list is the distinguished representative of Malaysia.

Space and society (agenda item 10)

Mr. N. IDRIS (Malaysia): Thank you, Mr. Chairman. The contribution of space technology to societal well-being is always a major target of all our activities. Another aspect of the contribution of space to society is in the realm of education and outreach. To this end we have carried out many activities. We will highlight a few.

- To promote innovations in satellite design. University researchers were invited to propose innovative solutions to satellite functions using the CubeSat design as a basis. We are pleased to report that two of these Nanosats will be launched as piggy-back with the RazakSat launch.
- To bring satellite design development right down to the youth level, we are embarking on a competition in collaboration with Japan. This activity allows university students to modify a small satellite, to carry out some basic functions.
- In 2005 we established the Artist-in-Residence fellowship. The fellowship aims to diversify the approach of ANGKASA towards its public promotion programmes in order to enhance creativity and innovation, at the same time, inspiring artistic ideas in line with space science as a whole.

The National Planetarium is ANGKASA's main showcase to the public. It is intended to create an environment of learning through a different experience that will engender curiosity about space and the world. We invite artists, writers, poets, dancers, scientists, educators and all others interested in the fusion of the arts and space science to apply. We expect the outcome to be interdisciplinary projects that combine the arts and space science.

- In 2006 the National Space Agency organized the Bahti Art competition, entitled, Space my inspiration. The objective of this competition was to encourage bahti designers to combine space science elements in producing bahti art. This competition received very good response and there were 106 entrants.

- The national space challenge for the Prime Minister's trophy is a programme designed to encourage and develop interest in space science at the primary school level. In the year 2006, more than 10,000 children aged 10, all sat qualifying tests conducted at all States throughout the nation. Three hundred of the best students were invited to attend the hands-on Academy sessions conducted at six venues. There, the best pair from each State represented their State at the finals.
- The rocket launching technology competition conducted every year has the following objectives:
 - (a) to instil interest, enhance understanding, skill and community knowledge in the field of science and space technology;
 - (b) to instil in students a creative and innovative mindset;
 - (c) to provide a base which will help in enhancing the understanding for the application of theory and concept that has been learned through a hands-on activity; and
 - (d) to make the field of science and space challenging yet fun.

In concluding, Mr. Chairman, we are confident that these activities we have put in place will inspire our predominantly young population. The skills exposure they acquire through such activities will enable them to better compete in the space arena in the future.

The CHAIRMAN (*interpretation from French*): Thank you for your statement on behalf of Malaysia. I have to say I am very impressed by the scope of activities, targeting young people in your country. I would like to congratulate you on these programmes.

I am now going to call upon the delegation of the United States.

Mr. J. LOGSDON (United States of America): Mr. Chairman, ladies and gentlemen, distinguished delegates, I am here as an advisor to the United States delegation but primarily in my capacity as a long-time observer and student of space matters and Director of the Space Policy Institute at George Washington University in Washington, D.C.

Several months ago your Chairman asked me to prepare some remarks on a very broad scope picture of the likely developments in space in the twenty-first century that could challenge COPUOS and, indeed, international institutions as they move forward, so that is the intent of these brief remarks this morning.

It is hard to read that paper on the right but it is my very first graduate school paper in the Fall, 1962 semester and it was a discussion of COPUOS, so I think legitimately I can talk about issues that have come before this Committee for a very long time. Obviously, 45 years later, the world is different, space is different and the pace of change is rapid and these are the challenges I hope to suggest this morning for the Committee's consideration.

The world is very different and what happens in space is very different. Much of what happens in space has become so transparent that we do not even think about it. We have integrated space systems into the modern life in ways that make them global utilities. I believe that trend will only continue in the years to come. There is a certain artificiality in treating space separately as a special sector as we have for the past half century. In many ways space is now a place where things integral to modern life happen and where the broad trends that shape the future of the globe and of its people will influence what happens in space, that relationship will continue to affect the work of COPUOS and all who work in the space field.

Space is a busy place, this is one representation of the number of satellites in orbit and there are, of course, spacecraft on the way to Pluto, in orbit around Saturn, Mars, Mercury, Venus, so space is a busy place and if you see, most of the satellites in space are civilian in character or have some dual-use characteristic. Almost 50 countries now own or operate satellites, in addition to the various private sector operators, so space is busy and will only become more busy.

The economic aspects of space activity are a significant part of the global economy, somewhere close to \$100 billion in revenue, much of it for the services that are provided by satellites rather than the hardware, the launching aspects of satellite technology.

There is significant potential for future growth with new areas and one I will talk about is passenger space travel in the future as being something that may well add much more economic growth to the space sector. Here is an example of the future integration of space systems, most of you got here on an aeroplane or the U-bahn, once we depend on global positioning

navigation and timing satellites, communication satellites as the instruments for air traffic management, space again will be one of these areas that is so integral to the way life goes on that we will all become very dependent on it.

One projection, this is sub-orbital passenger space transport over the next 15 years, shows a \$7 billion sector, with maybe 14,000 people a year, going into space, I think this is a bit optimistic but serious people are making these kind of forecasts. Many of you know that you can book a flight, go to the website in Virgin Galactic, pay them \$200,000, a small fee and it is possible to get in line for flights that are supposed to begin less than two years from now, we will see.

We think of space as a high technology sector and indeed it is but because of the risky character of space activities it is not at the cutting edge of modern technology. What happens if the convergence of developments in nanotechnology, in computers, in cognitive science are integrated into the way our space activities take place. I think that there could be significant areas of technological revolution in the conduct of space activities that are not yet foreseen.

Given the dependence on space comes the issue of vulnerability. It is important, indeed I think essential, that these global utilities be there when needed, be there all the time. A crucial question for this Committee is how to make sure that peaceful space activities can proceed free from threats of disruption. I know that the International Academy of Astronautics study on space traffic management has been presented to the Committee, it is just one of many suggestions on how to approach this issue. The Committee's work on space debris is a major step forward in making the space environment less subject to disruption and I certainly believe that attention to how best technically to ensure that the space environment can operate, free from both purposeful and accidental disruption, ought to be a major agenda item focus of attention in the future.

The rest of my remarks will deal with space exploration. The United States has declared policy the human and robotic exploration of the Moon, Mars and beyond and we are beginning now a basically open-ended, centuries long, process of moving out from this planet, moving out from low Earth orbit, returning to the Moon, eventually human travel to Mars and beyond. This has been done for very different reasons than the attempts by the United States and the Soviet Union to reach the Moon back in the 1960s and I think

those reasons are important for the Committee to consider as it shapes its future activities.

I understand that my colleague, Mr. Higgins, briefed you on the just-released global exploration strategy that 14 space agencies issued a few weeks ago, 12 days ago to be precise. I commend the language of that strategy to your attention in the sense that it talks about benefits for all people, not just 14 space agencies and the countries they represent. New opportunities for business, services, economic expansion, strengthening international partnership, inspiration of youth and I think this bottom question, how will all countries of the world, not just the major space-faring countries, become engaged in this grand effort is one that is important to consider. Look at the language in the strategy, space exploration and by exploration I think it is not all of space activity it is that activity going places away from the Earth. Is the strategy argues essential to humanity's future, it encourages nations of all sizes to work together in a spirit of friendship and cooperation. It seems to me that the Committee on the Peaceful Uses of Outer Space has to be involved in making it possible for encouraging nations of all sizes to work together.

What is this exploration initiative about? It is not particularly about science. I quote here the Science Advisor to our President, Dr. John Marburger, who suggests that as you see the greatest value of the Moon lies neither in science nor exploration but in its material. I recognize that there is an existence treaty on the Moon that has been ratified by a number but not a great number of countries, it seems to me that some of the issues that are involved in that Treaty will have to be revisited as this motivation for moving out into space becomes real. The current administrator of NASA, Michael Griffin, _____ (*inaudible*) form a few months ago in January, made the remark, we have the technology and economic wherewithal to incorporate the benefits of space into our sphere of influence and the word "our" there, is not the United States, it is humanity. Space exploration is not this century's greatest adventure it is an imperative and if it is not pursued we could have catastrophic consequences. So engaging COPUOS in the activity known as space exploration seems to me to be an important part of the future.

If there are technological breakthroughs that lower the cost of access to space I think there is a whole new world that can open up. We are still using the basic propulsion techniques that were first suggested by Tsiolkovsky in Russia, by Goddard in the United States, by _____ (*inaudible*) in Germany. Early in this century there is work on alternative ways of

accessing space and, if that breakthrough can happen, here is one picture, very optimistic one, of a future. This says 2030, five million passengers a year, daily flights to the Moon, gas stations, propellant stations, hotels scattered around the Earth/Moon space. As a long time student of space I do not think this is going to happen in the next 23 years but it gives one a sense of what could happen sometime along the way and that is a very different world than the space world when COPUOS first began its activities 50 years ago and I think a challenge for the future. Thank you for your attention.

The CHAIRMAN (*interpretation from French*): Thank you Professor Logsdon for your statement. His presentation certainly affords us insights as to the development of space activity not just in near Earth but also towards the solar system via the Moon.

On item 13 as you know we are going to start, perhaps even today, discussing future activities of the Committee and I was thinking that it might prove interesting for delegations to hear a presentation such as yours, from a distinguished authority, international authority, who enjoys observer status, very attentive observer status, with respect to the development of space policy not just in the United States but internationally. Once again thank you very much for that presentation, I am sure that over lunch many delegations will be happy to engage in a discussion with you on various points that you have referred to in the course of your statement.

Now, I would like to give the floor to our distinguished delegate of France, Mr. Alban Duverdiér.

Mr. A. DUVERDIÉR (France) (*interpretation from French*): Thank you Mr. Chairman. The French delegation considers the contribution of space-based systems to security, health and the environment, as a priority. They should be based on building on the excellence already achieved in such areas as satellite telecommunications, observation of the Earth, navigation and localization. In this context, we would like to share instances of international cooperation in the areas of tele-medicine and tele-epidemiology to which CNES, the French Centre for Space Research, has contributed.

Mr. Chairman, the francophone initiative to promote the reduction of mortality among mothers and infants has led to setting up an African Centre of Training for Distance Learning targeting health workers through the Global Francophone Digital University. Reducing mortality among mothers and

infants is a major development goal for the third millennium. Monitoring pregnancies and confinement and monitoring nursing infants is usually the responsibility of primary care centres. Paramedical personnel plays a crucial role here. This personnel is often isolated and these people learn as they can to meet new challenges, such as for example, caring for pregnant women or infants who are HIV positive.

Putting in place a short and practical continuous training programme for this category of care workers is indispensable so that the treatments accomplished by the international community be used in an effective manner. It is important to share experience and to apply new technologies to maximize the use of limited resources for training. The training model chosen by the Global Francophone Digital University uses both human tutors and technology. The students are in class with tutors, the courses are sent via satellite and projected on a big screen. As a constant exchange with the remote professor and an alternation of lecture courses and question and answer sessions. This system makes it possible to promote mass training using limited human resources among African specialists. It takes place throughout the network of francophone tele-medical areas in Africa. An average of 400 participants, per interactive course, take part.

The estimated losses linked to the bad use of expensive medicines, such as insulin or anti-tuberculosis or tri therapeutic medicines alone, would be enough to compensate for the expenses in setting up such a system.

Mr. Chairman, for 10 years CNES has also supported projects in tele-epidemiology using space tools to promote epidemiological monitoring and set up early warning systems. The space monitoring of epidemics has been operational for one year now. It makes it possible to use the ARGOS system for epidemiological monitoring and it associates CNES with various medical teams in Niger and Burkina Faso. After an experimental phase, 44 beacons were set up in primary care centres to compensate for the lack of telecommunications means on the ground. These beacons collect medical, environmental and sociological data from remote infirmaries. After this one year of operations the first results are assessed.

Digital information is sent through secure channels by the infirmaries and becomes available in less than two hours at the research centre in Niamey in Niger. Two types of data are transmitted regularly, weekly summaries which facilitate monitoring important pathologies and diseases and real time alerts.

For one year now, this network of beacons designed to study the impact of climate and evaluate the effectiveness of the use of impregnated mosquito nets on the spread of malaria has led to registering several cholera alerts, as well as rabies alerts, and other indirect alerts such as situations of malnutrition.

In the technical sphere this system has proved that it is totally adapted to the reality on the ground even when used on a large scale. Thank you.

The CHAIRMAN (*interpretation from French*): Thank you very much Mr. Duverdier for your statement on behalf of the French delegation presenting tele-medicine projects, tele-epidemiology, focusing on the African continent.

Now I would like to give the floor to the delegation of Canada.

Ms. A-M. PHAN (Canada): Mr. Chairman, the progress of a nation resides in its youth. That is the reason why we believe it is important to invest in education for the benefits of society. The Canadian Space Agency, through its space learning programme, is one of four founding members of the International Space Education Board (ISEB). Designed to enhance collaboration between space-faring nations in the area of education, the Board is currently comprised of representation from the Canadian Space Agency, NASA, ESA, JAXA and CNES.

Since its inception in 2005, the ISEB members have collaborated annually to provide approximately 400 under-graduate and graduate students with the opportunity to attend the International Astronautical Congress where they partake in student learning focused activities in the international student zone, a meeting and learning environment designed and supported by each of the ISEB members.

For the IAC 2007 event in Hyderabad, the Canadian Space Agency will support the participation of 20 Canadian graduate students. We look forward to renewing our collaboration with international partners while extending learning opportunities for student participants through the coordinated efforts of the local organizing committee representatives of ISRO and members of the ISEB. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you very much for your statement on behalf of the Canadian delegation presenting your activities in the field of education.

I will now be giving the floor to our colleague from Nigeria.

Mr. O. JEGEDE (Nigeria): Mr. Chairman, the Nigerian delegation is particularly pleased to address this Committee on agenda item 10 at its current session, space and society.

Since 1999, the National Space Research and Development Agency (NASRDA) was established. In realization of its national mandate on space, the Agency has been promoting awareness of the Nigerian public to the benefits of space science and technology for sustainable development.

It has also mounted educational activities aimed at inspiring students' interest in space science and technology with a long time goal of fostering capacity building. The acquisition of an Earth observation satellite, NigeriaSat-1, in 2003 and the very recent successful launch of the Nigerian communication satellite, NigComSat-1, have opened up a vista for applications in such areas as communications, tele-education, tele-medicine, Internet services, voice and data and Earth observation. These resources are the key to the actualization of the Millennium Development Goals.

The Centre for Space Science and Technology Education, an activity arm of the National Space Research and Development Agency, has developed outreach programmes for students of mostly primary and secondary schools on space education. This is carried out through practical workshops, exhibitions of mock-ups of space hardware and presentations on different themes of space science. Both national _____ (*inaudible*) and electronic media are fully involved in promoting the educational activities of NASRDA.

Mr. Chairman, efforts have now begun and are intensified to introduce space science education into the school curriculum. The aim is to develop a structured study to stimulate interest of the youth early in space science and technology. What we call as "catch them young" and to demystify space. There is a workplan to actualize these goals for 2007-2009. The kick-off of these efforts was the first National Workshop on Space Science Education Curriculum Development for Schools which was held last May with the participation of UNESCO.

By the successful participation of a Nigerian schoolgirl, Stella _____ (*inaudible*), a nominee of NASRDA, in a zero-gravity flight that took place at Kennedy Space Centre in Florida, United States, on

23 September 2006, it opened up opportunities for thousands of more children to seek the thrills of space. It also afforded opportunity to launch space clubs for school-aged children in May 2007. This youth inspirational and educational activities are part of the national space development road map.

Mr. Chairman, the outreach programmes will be expanded this year to include celebration of the 50th anniversary of the space age. A technical committee has been set up to coordinate activities including, arts and essay competitions by young children, exhibitions of mock-up of space hardware, distinguished lectures and seminars. The national programme is organized in partnership with Space Week International Association. Mr. Chairman, distinguished delegates, thank you for your attention.

The CHAIRMAN (*interpretation from French*): Thank you very much for your statement on behalf of Nigeria and for the information that you have shared with us on youth centred education activities in the outer space field and for the very significant development of this activity in your country. This, of course, is going to be subject to ever faster developments when your telecom satellite goes into full operation, one has just been launched.

Now, I would like to give the floor to our distinguished observer from Bolivia.

Mr. H. BAZOBERY-OTERO (Bolivia) (*interpretation from Spanish*): Thank you very much, Mr. Chairman. With your permission I am going to be reading the statement of Bolivia on behalf of Ambassador Horacio Bazoberry who unfortunately has not been able to be present here today.

Statement on behalf of the Republic of Bolivia written by His Excellency Ambassador Horacio Bazoberry for the fiftieth session of the COPUOS meeting in Vienna in June 2007.

Sir, distinguished delegates, ladies and gentlemen. At the outset of this brief statement I would like to congratulate you, Chairman, upon your election to the head of this session's work. I would also like to congratulate the members of the Bureaux upon their election as well for this fiftieth session.

I would like to take this opportunity to personally thank Mr. Sergio Camacho who, during his term in office as the Director of OOSA in Vienna, always demonstrated so much devotion to his efforts. It is his constant wish to contribute to the expansion of

the peaceful use of outer space will allow him to pursue these efforts in the future.

I would like to reiterate the importance of COPUOS' work with respect to its efforts to disseminate work on outer space and I would like to support what was said by the representative of Colombia, on behalf of GRULAC, on the occasion of the fiftieth anniversary of COPUOS.

This was the beginning of the mastery of outer space with Sputnik I, there was the fortieth anniversary of the entry into force of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies which was crowned with the Heliophysical Year of 2007.

Bolivia believes that its active participation in the efforts of COPUOS is especially important given the interests of developing countries and their interest in good sustainable work in the future. This has been indeed confirmed by UNISPACE III and various resolutions adopted in that regard.

I will be referring to item 10, space and society. The revolution in the information society which has occurred has now allowed mankind to accelerate decision-making processes. This indeed has made for many developments in the ethics of communication, networks of communication, telecommunication have developed a pace, the globalization of the information world has been recognized and the development of these technologies is of fundamental importance especially for ever so many developing countries, which in rural areas account for a high percentage of young people who cannot go to school or where schools do not have proper equipment, to ensure proper primary and secondary school education.

This is why access to a satellite platform to promote knowledge dissemination is something which is very dear to our hearts. Better education would allow achievement of the Millennium Development Goals and also allow us to whittle down our demographic deficit. We believe that the sharing of such a knowledge, especially with developing countries, is something which should be the object of consensus. Technologies must, indeed, be allowed to make for a fair social basis and for a new approach, an attitude, in society which is more generous and inclined to share resources which are limited.

These issues are of particular importance to our country. Over the past years Bolivia has constantly

and ever more been participating in various educational centres both in the private and public sectors, has used satellite centres for Earth observation, for earth management, agro, meteorology, sweet water management, mining, etc.

In conclusion, on behalf of my Government, I would like to reiterate the wish of Bolivia to be an active member of COPUOS to promote exchange of experience and information on science and technology in outer space and I would like to thank GRULAC and all delegations who have given their support to my country. Mankind is part of an enormous, constantly expansive, universe. Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you to our colleague representing Bolivia in this Committee. As we know, Bolivia is a candidate for member State of this Committee. We will speak about that more under item 13.

Would any other delegation like to speak on space and society?

That does not seem to be the case. We will thus continue our consideration of this agenda item, space and society, this afternoon.

I will shortly adjourn this session and we will have technical presentations. I would just like to remind you, distinguished delegates, that at 3 p.m. this afternoon, we will take up agenda item 13, other matters. As you know, this agenda item includes a number of different issues, on the one hand, a discussion on the future role and activities of the Committee, on the other hand, various proposals submitted to the Committee with regard to countries that would like to become members and also requests for permanent observer status from countries.

We will start our consideration of item 13 with matters pertaining to the composition of the Committee, that is the request from Bolivia and Switzerland for membership. At that time, you will be welcome to make statements or take part in that discussion.

I suggest that we now move on to technical presentations. I would like to remind speakers that the time limit for each presentation is 20 minutes. The first speaker is the representative of Austria, he is going to speak about a new paradigm for geographical education.

Mr. L. BECKEL (Austria): Thank you, Mr. Chairman for giving me the floor for this presentation.

I am very pleased to report, for the second time since a couple of years, about this topic, School Atlas geography from space or a new paradigm on education, I think it is essential and you are aware of this matter as well. We have to carry out space sciences, space knowledge, space industry and whatever is correlated to it. We here in this room are all specialists I would say but we have to carry it on to the broad public and we have to do it early. It has to be done at high school level and some delegates kindly reported on their activities, I think this is the right manner to continue because if we do not teach the schoolchildren and students in the possibilities and applications of space they will never learn it later on.

In German we have a saying “Was Hänschen nicht lernt, Hans lernt das nimmer mehr” it means, what little Hans does not learn in school, once he is grown he never will pick it up. This is of course true because everybody has too much to do afterwards and runs into different proficiencies. If we now teach high school students, in a broad manner, on applications of space, they will at least have heard about it and once, ten years, twenty years later, they come into their jobs and are becoming decision-makers they will remember it and say we use our instruments.

In this sense, this atlas was created with support from ESA. The background of it is to bring it into schools to teach not only the teachers but also the students on the information which we can gain from Earth observation from space and to use it for our globalization efforts or activities, whatever it is. Satellite Earth observation is the only means which can give us the information which is needed for a sustainable development on our Earth.

The atlas you will find in your today's papers in your mailbox, a little letter of invitation to pick up one of these copies, for each delegation, it looks like this. You can carry it home, 2.8 kilograms and 288 pages. It consists, in general, of four parts. One is a printed school atlas, the digital school atlas, DVD ROM, where you have the full contents of the atlas and I will show you some pages. A teacher's handbook is available as well with text in 200 pages and a connection to the Eduspace website, which is very important, you will find the homepage in the book. It is not enough to look only at the pictures you have to put the children to work on it, hands-on learning by doing, otherwise you are not really successful. We do not only do it on DVD ROM, there are two DVDs necessary for

it. Personally, I cannot develop the same erotic feeling to a DVD like to a book. A book I can take along wherever I go, I can open it, I can leave it on my desk, I can take it to bed, I can carry it onto the train and, whenever I go through it with my sums so I see this and that, I discover many new things. If you switch off the DVD, the images are gone and there is no chance to recall it. Both instruments are living together and depending on each other because with the DVD you can zoom in to the extent and you really see more than in the book.

We have an introduction in the book about the European Space Agency which supported this atlas considerably. We give a global overview on about 11 maps, you will see the global view which you will see immediately, then we go to the continents. Each continent has six double pages, then we go into detail, the natural sphere and the cultural sphere and show how these different spheres look in satellite images and which information you can extract from them.

We follow here the philosophy of Earth observation from space, the top down approach, we look first to the whole globe and then we zoom in to our local place. I have 28 transparencies, I will not show them all otherwise I will exceed my 20 minutes. This is one sample page about space application, space technology which is important to show the students that there are big opportunities for their future professions in space sciences, in space industry.

Then the next page, this is the practical site. The European Space Agency developed this Eduspace programme which can be accessed by every teacher and he can download software for processing the images. On the DVD you will have a lot of original data that you really can practice with your students what you are going to see and you can repeat what you see in the book.

Then we come to the global view which is necessary to understand our world better, to understand not only the geography but also the people better and to see the different zones. Looking at satellite images you have the polar area, you have the moderate areas, you have the tropical areas, how do they look in satellite images, a few samples are given in the _____ (*inaudible*).

Here you have the different projections which have been applied to the book. You cannot roll out a curved system to a flat plane but it shows you practically, where am I living? In the Sahara or in the Alps or in a tundra zone and how does it look like, how it is correlated to the transition zones which lead to

other climate zones. With this we go then to different other things, you will discover them yourself.

One main thing is the population distribution on our globe. You see these highly populated areas in Asia, in India, in Africa, where they are in Europe in America and, since they are big areas which are empty of people, they offer a lot of opportunities. What is more important, we have to look to the population increase, we are growing so rapidly on Earth that we need to use all opportunities for our sustainable development of the Earth.

These things are correlated with a lot of other topics, rainfall for instance, vegetation zones and so on and you always need to consider your whole environment if you go into detail.

From there we jump down to the continents and each continent has, as I said, three double pages giving you an overview which is much better than any classical map. In classical maps you cannot compare landscapes. Here you see the vegetation coverage, you see the distribution of people and you see their economy. If I zoom in somewhere here, regardless where we are, you see a clear transition zone from the Sahara into the tropical belt with the Sahel zone and you can explain to students what is going on in these areas and how they depend on the Earth.

You also have landscapes in the same scale to compare them to each other and here you see for instance, Lake Chad, nobody has an idea from the public, how big is Lake Chad. If you look into this book, we made this all at the same scale, you see that it is as big as Sicily for instance and you can easily implement also the Okavango delta into Lake Chad, all the same scale. You must always keep in mind this relationship to each other.

We go a little bit further, we show the continent under different seasonal conditions, you have the European summer time, you have the European winter time and you see the movement, what we explained yesterday already, with the water. The content of the water of the atmosphere with the moving intertropical rain period, how it is correlated with the rainfall, how this is correlated with the vegetation, shown in NDVI, the Normalized Difference Vegetation Index, and how does this affect the area itself, the geography. You have the _____ (*inaudible*) data in the dry season, in the wet season. On the right side you have a change detection map how this land use changed during these seasons. Where do you have water? Where do you have vegetation? This is also correlated with the occurrence of tsetse flies, so you

can explain to the children how things are intercorrelated and how nature and culture are interdependent on each other.

If we go to the third part of the book, the natural sphere. Here we have large overviews, for instance, of the central Sahara. If you look at a topographic map you will never get these fascinating structures which you find here and the colours of the desert and how these also are correlated.

You have a sediment area rocks of the Tassili mountains, crystalline rocks of the Hoggar Massif and you have the volcanic things of Al Haruj and Tibesti. You see also here you have a little volcano. The wind is coming from the sand dunes from the north-east and it is eroding this volcanic matter and dispersing all this dust and volcanic stones over huge distances of the Sahara. These correlations must be understood if you would like to work for a sustainable development.

If we talk about rivers. In the book you will find three major rivers of the globe, the Yangste river, the Mississippi and the Amazon to compare them in the same scale with each other. You will find so many interesting details if you zoom in. If we go to the junction of the Rio Negro and the Amazon, you see how the deforestation moves forward along from the main roads which are opening up the tropical forest and from there the clear-cuts will go on, not to gain tropical exclusive wood but to get space for the people to live there.

Natural hazards. You can only observe them and to understand their occurrence if you look at the greater vicinity. Here, for instance, cyclones or the dust storm come from the Sahara going to the Atlantic Ocean or, you see what happened to Lake Aral after it lost its water, you have a big source for dust storms which are moving towards the south-east. We talk about forest fires or we see how a forest fire is expanding. Within a couple of days you have here in Australia, this is the beginning and you have it two days later, it is expanding. All this you can control by continuous observation from space and explaining to your students that they are really going to use these instruments.

Settlement patterns. They are bound to the culture, to the pace of living to the region. Here you have a comparison of four different types, one is the Euphrates in Syria. The settlements are bound from former times on the high level terraces because the river bed was regularly flooded. Now people are moving inside because the floods are diverted through to dams. Here we are in China and what you see here

clearly is, for instance, inner political boundaries dividing the country. On one side you have little channel villages along the rivers and on the other side, by political decision, you have _____ (*inaudible*) little villages, they are all surrounded by _____ (*inaudible*).

If you go to Bavaria. This was covered in forest up to the eleventh century, then they started with clear-cuts around the forest and put small villages inside them. Up here you have Munich and these farm areas are becoming sleeping space for the Bavarian or Munich population.

Here you have this typical type of clear-cut as we find it in Austria, from the medieval times, when they opened the forest, as I showed you before, they built a road and from there they put in farmhouses and then they clear-cut to the left and right but, this is not in Europe, this happened in the ninth/eleventh century and eleventh/thirteenth, this the Amazon. So we have again practices in the same clear cut patterns, you can compare and you can explain a lot to students and to your managers of the country.

Images taken at night are so fascinating. You have three patterns, here you have London, it is a hot centre, with satellite areas around it. Here we have Los Angeles, a regular street pattern, less concentration in one place, less traffic jams and here you have Buenos Aires, I do not want to go into it. We discussed this year as well, yesterday 1972 of Riyadh and this is 2000 of Riyadh and you see how the city expanded you can develop or you can understand and assess the trends, where we are going and what we are doing.

Theoretical models created in the last century and even four centuries ago, in the fifteenth century, _____ (*inaudible*), he was one of these economists, he explained that, around a city you have concentric rings of applications, a vegetable patch, for instance the dark green and then you have another for cereals and then you have the forest outside. Depending on how much travel distance the different products can send. You have this clearly seen in Shanghai for instance, the downtown area, the light green is a vegetable belt and then you have those areas where you can produce products which you can transport for more days. From Christaller, he created this theory of central places, to have one major city as a central place, you have semi-central places and then you have quarter-central places, then the villages. If you have the right area, you see this clearly for instance in China after snowfall, here you have the central place, you have one ring with semi-quarter or half central places and the other one with semi-quarter central places, it is exactly the same structure which Christaller developed by thinking and

not by knowing. Here you see this in the satellite image you can explain this and use it for your teaching.

You can go through the whole world with different topics. I would like to show you, of course we cannot explain everything in this book, there are a lot of samples, globally distributed. You see the distribution of different topics and samples around the globe which you will discover in the book and, for Europe, we have got into higher resolution full coverage to give more details but this can be done for other places of the world as well.

This book exists now in German, English and French and an Hungarian version edited by our friend, the first vice-Chairman, Mr. Both, last year. In addition to this, nationwide small booklets are prepared to go more into the different countries which you need for your own education. The global view and the local view. Thank you very much for your attention.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Beckel for your presentation of this School Atlas that you developed with the help of ESA. Indeed, it is fascinating and very educational in the way it is constructed and I hope it will be available in other languages, at least European languages.

Any questions for Mr. Beckel? I see none but I encourage you to ask him questions during lunch break. Mr. Beckel is reminding delegates that you can pick up a copy of the book, there is one available for each delegation.

I am now going to invite Mr. Osama Ammar and Mr. Marwan Koudmani of Syria for a presentation, entitled, Experience of the General Organization of Remote Sensing of their country.

Mr. O. AMMAR/Mr. M. KOUDMANI (Syria) (*interpretation from Arabic*): Thank you, Mr. Chairman. Mr. Chairman, distinguished ladies and gentlemen, my presentation relates to the organization of remote sensing in Syria and we will focus on water resources in accordance with item 11 of the agenda.

You know how important water is and the problems associated with water in the world, in general and, in our region in particular. Our water resources are quite scarce and they are being depleted. There is a huge demand for water because of the increase in population and the increase in agriculture and industrial projects with increased pressure on these water resources.

On the screen now, on the left hand side, this is a source of water in Syria in the old times and the other one is the current situation. The one I am referring to is the current situation as a result of the increased demand on water. The problem in general, with regard to water in Syria, is related to the scarcity of that source and the way we manage water and preserve it and protect it against pollution. We have been trying to deal with these three problems through exploration of new sites in order to meet the needs and secure additional sources, manage available resources and try to prevent pollution of water resources.

With the regard to exploration of groundwater we have used remote sensing as well as other techniques with a view to identifying sites. We have collaborated with local and international organizations with a view to carrying out that. I will give some examples of discovering water.

This picture covers the south-western part of Syria which is in dire need of water. We studied the different elements and we used remote sensing and we have prospects for groundwater here. There are a number of wells here that we have got through some space pictures and we drilled some wells in order to provide water to the population in this region. This project was carried out in collaboration with FAO.

In the western part of Damascus we have also identified some sources of water in order to provide drinking water for Damascus. On the coastline of Syria we have an abundance of water, in comparison to other regions, because of rain. However, the rainy season is quite short and most of the water goes into the sea or it can seep into the ground and then seep again into the sea. We have several springs here along the Syrian coastline.

This is an aerial picture, Landsat, that was processed. This is a thermal band, this relates to the city of Tartus and Baniyas. We have indicated indications of water seepage under the sea. This kind of picture does not enable us to carry out precise studies so we had a thermal survey, through an aircraft, and we have identified certain anomalies and we have done that throughout the Syrian coastline.

The results have shown that there are certain thermal anomalies. The first one relates to submarine springs, the other relates to river outflows and we have also pollution along the coastline and we have also _____ (*inaudible*) inside the sea.

The first model here, this is a well under the sea. It is not _____ (*inaudible*) actually, it is in the

neighbourhood of the city Baniyas, there is a huge amount of water here. We have seen this amount of fresh water under salty water and through thermal surveys we can separate fresh water from sea water.

This is another picture of the same well and, by comparison, we find that the sea water temperature is 27° whereas the fresh water temperature is 24°.

The other form of anomaly is river outflow during the summertime. During the survey we have come across certain anomalies here, these are the disposals from certain tankers and then we have also those positive anomalies whose temperature is higher than that of the sea. As I said before, fresh water temperature is less than the temperature of the sea but here the temperature is higher. At any rate, there are areas where the temperature is 29° and this again is a result of industrial disposal into the sea. All these sites have been identified along the coastline and we have carried out studies in order to find out how to use this water before it seeps into the sea.

These are some of the anomalies, this is a very important anomaly here in the neighbourhood of the city of Tartus and the city of Baniyas. We have here some faults and we have studied those faults and have come up with recommendations for drilling some wells in order to make use of this water before it goes into the sea.

We have also a project to transfer this water to Damascus which is 300 kilometres away. The other thing that we have studied in our Organization is the study of available resources. There was a source in the neighbourhood of Damascus and that was not enough evidently, as you saw in the picture, so we tried to drill some wells in order to enhance the availability of water for Damascus. We have a mathematical model here for this well in the neighbourhood of Barada and another location at Awad, on the maximum use of this water in order to extract that _____ (*inaudible*) from the basin and then reprocess it and store it for use in winter.

The other shape here relates to prevention of pollution of water resources. We have certain resources which are very important. This is one and this actually replenishes two coastal cities with water. The measures we take in terms of prevention of pollution are not enough. In order to do more, we have made a study in order to analyse the elements and to analyse the faults and we have divided that into sub areas. The closer the water to the surface the more the pollution of course, so we have the red regions are the most polluted, the blue is less and the green is still less. We have recommended certain measures also in addition to the

measures adopted before with a view to preventing pollution.

That is all I have, thank you very much for your attention.

The CHAIRMAN (*interpretation from French*): Thank you very much, Mr. Ammar for your presentation on the uses made of remote sensing on water resources management in your country. You have given several examples, which are particularly enlightening, on space-based Earth observation techniques that can be used.

I will now be asking whether any questions are to be addressed to Mr. Ammar? I do not believe that is the case.

Thank you once again.

The last presentation, I will be giving the floor to Mr. Kukla and Mr. Rennhofer of the Space Generation Advisory Council, on space education without borders.

Mr. M. KUKLA/Mr. M. RENNHOFFER (Space Generation Advisory Council): In recent years, the Internet has become more and more important to bring information to the people all over the world and also to let them interact together but if you are searching for space in the Internet most of the time you will not find the information you are looking for. You find several pages and normally a user looks inside five pages and then he will go offline or search for something else. So a group of students from Vienna University, Institute of Physics and some multimedia artists decided to launch a project which should unify space topics and education inside one portal.

The name of this webpage is noaNgea. This is a unification from an e-learning tool where video screens will be put online. Users can learn from videos or download scripts, also discussion forums will be there so the users can interact with each other. There is also a space topic where you can get space-related information and also a community tool.

Let me explain that in detail. First the e-learning tool. Like I said before, there will be video screens online from space lectures, basic space lectures or detailed space lectures from universities. It is free access for everybody so everyone from all over the world can access this page and get the information he wants.

There is a search engine implemented in the page so the user can search for the topics he is interested in and he will get all the results combined with this topic. If he searches for solar system for example, he will get video screens about the solar system, basic lectures or advanced lectures and he can also download scripts on this topic and he will also get links to space agencies or educational organizations and he will also get the possibility to discuss his interests in several forums.

The next point of noaNgea as the third planet. We think that there is no third world but one, third planet, so we are all responsible for all of us and for the whole world. In this part of the noaNgea network there are many discussion forums and brainstorming areas where the members of noaNgea are able to put their suggestions online, how to solve several problems which we have on Earth. For example, water problems, like the speaker before told us, or climatic change or how to get low tech physics to developing countries that the people can solve several problems on their own.

There is a brainstorming area but there is also the opportunity to post projects online so the members of noaNgea have the opportunity to work online together to try to solve several problems we have on Earth. The background, how they can try to solve it, of course, is in the educational part. If they have less information about one problem they can switch back to the educational part, watch the videos or download lectures, read lectures.

Here at the third planet part, there is also a link list of organizations like UNESCO or HUMANA or Caritas. It is also free access and every organization who wants to have a link on our page can do this without any cost.

The next point in noaNgea is space. Like I said before, there are several Internet users who are interested in space. They go to Google and try to search the information they want to get but, most of the time they do not get it, what they get are several pages and they have to look inside all of the pages and that is no guarantee that the information they are searching for will be inside these pages. The noaNgea site tries to unify all space-relevant content from space agencies and space organizations. There will be RSS feeds, which means that an organization or an agency is able to put their content online on our page and they can also put banners online, like here, are two example banners, one from ESA and another one from NASA but these are just example banners because it can also be from another agency. Behind this banner you of

course have a link to your own website but you also have the possibility to put content directly on our home page. There are several links to agencies, space organizations and everything you want to know about space.

The network in noaNgea. If you register you have the opportunity to put your profile online in a folder with your special skills, with your job, mother tongue and your interests. If you are a member of noaNgea you have the opportunity to open some discussion groups where other members can discuss their educational problems, or any other projects, with you and it is an open discussion so we think that many people will be in the forums all the time.

This topic should bring people closer together. The users are interested in space so they should go to our site to get all relevant space content, to get space education and physics education and all education what will be built online in future. They have the ability to help our planet to solve Earth problems and this network should bring people closer together. It is easier to find someone with special skills and easier to work together on several projects because you have all information of all members online.

noaNgea should unify the whole Earth under the usage of the worldwide web. With this portal it will be easier to bring education to all, it does not matter from which country. To help solve Earth problems and also to work together on several space-related projects, noaNgea would help people get a better understanding of space and why it is that important to invest time and education in space. Thank you.

The CHAIRMAN (*interpretation from French*): Thank you for that presentation on the noaNgea site that you have developed for the Space Generation Advisory Council.

Would there be any questions on this statement? Brazil has one, I believe.

Mr. H. DE CASTRO-CARVALHO (Brazil): The address of the website is noaNgea.com or what is the website?

Mr. M. KUKLA (Space Generation Advisory Council): The address of the website will be noangea.com but, at the moment, it is not online yet because we are in the beta-testing phase, it will be online in two or three months. You can get in contact with us via SGAC because we have the cooperation and support of the Space Generation Advisory Council or via our email address noangea@spacegeneration.at.

The CHAIRMAN (*interpretation from French*): Thank you very much for that detail. The website is going to open in another couple of months. If there are no further questions we are going to be able to break up fairly quickly.

For this afternoon, we are going to be meeting at 3 p.m. We will continue our consideration of item 10, space and society. Then we will start on miscellaneous, under item 13. We will be starting that by considering the candidacies of two States that wish to become full-fledged members of the Committee and the applications to permanent observer status as well. Then we will broach item 11, space and water and, if we have enough time, then we will also take up item 12, sustainable development related matters and at the end of this afternoon, we will have a special technical presentation by the delegation of India.

Before we adjourn I would like to ask you to view the documentaries that will be screened today. One on COSPAR SARSAT, that is at 2 p.m. After that documentary, at 2.30 p.m., we will be able to see a Chinese documentary on space achievements in China.

Finally, I would like recall that delegations should submit to the Secretariat any updates or change in the list of participants that was distributed to you last week so that the Secretariat could come out with the final list of participants.

Would there be any questions?

Mr. V. CASSAPOGLOU (Greece) (*interpretation from French*): In my pigeon-hole I have an excerpt of the United Nations resolution on the establishment of the Committee. I was wondering why we are not aware of the mandate for the reason of this distribution. I was just wondering. Can I submit that we are not going to be changing this Committee? It is a question that I am putting because this is the first time that we get this sort of a document distributed.

The CHAIRMAN (*interpretation from French*): Some delegation, at the beginning of this session, put in a request and it was decided to distribute the resolution setting up the Committee in 1959, I believe, a long time ago, distributing this to all delegations so that we could all remember what the mandate of the Committee is and what the history is basically, for purposes of enlightenment and to make us mindful of the mandate of the Committee. Thank you very much and we will be resuming our session at 3 p.m.

The meeting closed at 11.53 a.m.