



Austrian Space Law Newsletter

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Austrian Outer Space Act 3



63rd IAC in Naples/Italy 22



Nebraska Conference 15

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EDITORIAL

Irmgard Marboe



The adoption of the Austrian Outer Space Act by the National Council on 6 December 2011 and its entering into force on 28 December 2011 has certainly been a highlight of the past months in the area of space law. Not only in Austria, but also internationally, this step forward has triggered a lot of attention. The implementation of international space law into national legal orders is considered as one of the key issues in contemporary debates in the area of space law. This has become increasingly necessary because of a growing number of private entities, such as research centres, universities and enterprises, which have started to carry out space activities. They are not bound by the existing international treaties as they are only addressed to States – the original players in outer space. In order to make sure that the rules and principle contained in the five space treaties and in several UN General Assembly resolutions – currently forming the regulatory framework for space activities - are also respected by private entities, an implementation through national legislation is necessary. States have a vital interest that also private entities act in conformity with international space law as otherwise – due to the specific characteristics of that branch of law – the States themselves might get responsible or liable. Michaela Hinterholzer's Article (page 3) provides some more detailed insights into the brand new law.

Another focus of Austria over the past months has been the exploration of the potentials of "small satellites" for developing

countries and other emerging space faring nations. In this context, Graz can be called the "space capital" of Austria. Not only was the BRITE Austria-TUGSAT satellite programme developed here, also international events are increasingly taking part in Graz. After the "Space Studies Programme" of the International Space University which took place in Graz for the first time and which provided hands-on training – including a rocket launch at the ORF-Park - the United Nations/Austria/ESA Symposium was dedicated to "Small Satellite Programmes for Sustainable Development" (see page 22).

This issue of the Austrian Space Law Newsletter also gives a brief overview of conferences and events where members of the NPOC Space Law Austria participated, such as the International Astronautical Congress in Cape Town and in Naples (page 23) the Nebraska Spring Space Law Conference (page 16) and a conference at the German Centre for Aeronautics and Space (DLR) on the relationship of public international law with space law announced by the intriguing title "In Heaven as on Earth? The Interaction of Public International Law on the Legal Regulation of Outer Space" (page 20).

I wish our readers an enjoyable time with this new issue of the Austrian Space Law Newsletter.

Yours,

Official Coordinates

a.o. Univ. Prof. Dr. Irmgard Marboe

E: irmgard.marboe@spacelaw.at

P: + 43 (0) 1 4277 353 11

F: + 43 (0) 1 4277 353 9

University of Vienna - Faculty of Law

Departement of European Law, International Law

and Comparative Law

Section for International Law and International Relations

Project "NPOC Space Law Austria"

Schottenbastei 10-16

1010 Wien

RÜCKBLICK *review*

The New Austrian Outer Space Act - 28 December 2011

Michaela Hinterholzer



As an Austrian newspaper put it, it is “a small step for humanity, but a giant leap for Austria” (Die Presse, 31 May 2010). In December 2012, two small Austrian satellites will be launched by an Indian launch vehicle from Sriharikota, India. Austria’s new role as a ‘launching state’ triggered discussions on the need of an appropriate regulatory framework. After having ratified all five treaties on outer space between 1968 and 1984, Austria now also adopted its own Outer Space Act, which entered into force on 28 December 2011.

The Austrian Outer Space Act with its only seventeen articles is relatively short, but nevertheless a comprehensive act which deals with all the legal aspects connected to space activities, such as authorisation, mitigation of space debris, registration, liability and insurance, transfer of space objects as well as enforcement and sanctions. One of the aims of this legislation was the establishment of a transparent system and a guaranteed flow of information between the different federal and territorial entities.

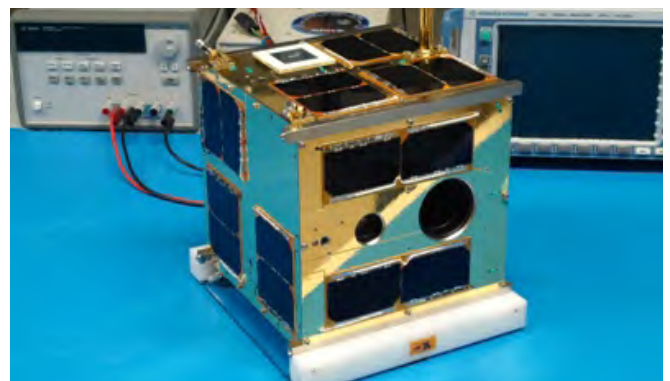
The first substantial issue the Outer Space Act deals with is the required authorisation by the Federal Minister for Transport, Innovation and Technology, which is a necessary prerequisite for all space activities falling under the scope of application of this Act. The conditions for authorisation include technical, legal and political aspects and relate to both State and non-State space activities. This provision therefore exceeds the

obligation contained in the Outer Space Treaty, which only requires authorisation and supervision of non-governmental space activities. Furthermore, also a change of the operator requires authorisation under the same conditions.

The Outer Space Act also addresses the issue of space debris, which is one of the major challenges relating to space activities and has been of utmost importance for the Ministry of Transport, Innovation and Technology from the outset. The mitigation of space debris is not only a condition for authorisation, but the Outer Space Act also refers to ‘internationally recognised guidelines for the mitigation of space debris’. This provision therefore stipulates the obligation to mitigate space debris, in particular to limit debris released during normal operations, to minimise the potential of on-orbit break-ups, to provide for post mission disposal and to prevent on-orbit collisions.

All space objects for which Austria is considered to be the launching state, according to the Registration Convention 1975, shall be entered into a registry for space objects, which is maintained by the Federal Minister for Transport, Innovation and Technology. The information, which needs to be submitted, is in conformity with Article IV of the Registration Convention and includes further data such as an appropriate

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designation of the space object, the ITU frequency allocation number, the manufacturer as well as the owner and operator.

According to the Liability Convention 1972, Austria is absolutely liable 'for damages caused by its space object on the surface of the Earth' and for 'damages being caused elsewhere than on the surface of the Earth', 'if the damage is due to its fault or the fault of persons for whom it is responsible'. Due to this international obligation, the Outer Space Act provides for a right of recourse of the government against the operator as regards the amount of compensation paid. Therefore, an insurance covering a minimum amount of € 60 million is one of the conditions for the authorisation of the space activity. However, if the space activity is in the public interest serving scientific, research or educational purposes, a lower sum can be determined or the operator can also be released from the insurance requirement, taking into account the risks and the operator's financial capacity. Moreover, also other national provisions of the Civil Code (Allgemeines Bürgerliches Gesetz-

buch) and pertinent rules under federal laws are applicable. Finally, the Austrian Outer Space Act also provides for monetary sanctions in order to ensure the compliance of prospective space operators. Article 14 stipulates an administrative penalty that has to be determined depending on the seriousness of the infringement on a case by case basis, with a minimum sanction of € 20 000 and an upper limit of € 100 000. If an act or omission by the space operator represents a criminal offence falling within the competence of the courts, additional and more serious sanctions, including imprisonment, are possible.

The new Austrian Outer Space Act covers a variety of issues connected to international obligations of Austria in accordance with the five UN space treaties and also takes into account the particular needs of space activities being carried out by Austrian operators.

„Zukunftsfragen der Erde – Lösungen aus dem All: Was uns Weltraumtechnologien ermöglichen“

Boris Levtchev

Die Veranstaltung „Zukunftsfragen der Erde – Lösungen aus dem All: Was uns Weltraumtechnologien ermöglichen“ fand am 22. Februar 2012 in der Ovalhalle des MuseumsQuartiers in Wien unter der Federführung des Bundesministeriums für Verkehr, Innovation und Technologie (BMVIT) statt.

Man hat erkannt, dass der Weltraum ein „Zukunftsraum“, aber zugleich schon heute von enormer Bedeutung ist. Stichworte wie nachhaltige Landnutzung, intelligente Verkehrslenkung, Satellitennavigation, internationale Zusammenarbeit im Rahmen von Organisationen wie ESA (Europäische Weltraumbehörde), die Internationale Raumstation, die Erforschung des Universums uvm. bildeten eine Grundlage für eine spannende Diskussion von Spitzenvertretern aus Wissenschaft und Wirtschaft.

Allen voran ist hier **Dr. Peter Hulsroj** zu nennen, seines Zeichens Direktor des European Space Policy Institute (ESPI) mit Sitz in Wien. Diese von der ESA und der österreichischen Forschungsförderungsgesellschaft (FFG) eingerichtete „Denkfabrik“ analysiert die weltweite Weltraumaktivität und dient den politischen Entscheidungsträgern in Europa als unabhängige Beratungseinrichtung. Peter Hulsroj eröffnete die Veranstaltung mit einem Impulsreferat, das den Zuhörern anhand von Beispielen laufender Weltraumprojekte und faszinierenden Bildern aus den Tiefen des Alls vor Augen führte, warum das Engagement im Weltraum über die bloße Neugier des Menschen hinausgehend zu einer Notwendigkeit für die Gesellschaft geworden ist, die trotz der hohen damit verbundenen Kosten im Interesse unserer Weiterentwicklung fortgeführt und vorangetrieben werden muss.

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An der anschließenden Podiumsdiskussion beteiligten sich neben Dr. Hulsroj noch Dr. Christian Hoffmann, Dr. Max Kowatsch, Prof. Irmgard Marboe und Prof. Otto Koudelka.

Dr. Christian Hoffmann ist Geschäftsführer des österreichischen Unternehmens „Geoville“, das die Privatwirtschaft, öffentliche Organisationen und Forschungseinrichtungen mit satellitengestützten Daten versorgt, die von Geoville den Kundenbedürfnissen entsprechend ausgewertet werden. Diese Daten dienen etwa der Kartographie, Raumplanung, Forst- und Landwirtschaft, Infrastruktur und anderen Bereichen.

Als weiterer Vertreter aus der Privatwirtschaft beteiligte sich **Dr. Max Kowatsch** an der Podiumsdiskussion. Dr. Kowatsch ist Direktor der RUAG Space Austria, der Weltraumsparte eines multinationalen Konzerns mit Hauptsitz in der Schweiz. Die RUAG Space ist ein Zulieferer von Produkten für die Raumfahrtindustrie. Die „Produktpalette“ umfasst etwa Subsysteme und Equipment für Satelliten und Trägerraketen.



Kleinsatelliten am Institut für Kommunikationsnetze und Satellitenkommunikation der Technischen Universität Graz verantwortlich. Er erzählte über die technischen Herausforderungen beim Bau dieser sensiblen Hochtechnologie und über den aktuellen Stand des Projekts. TUGSAT-1 soll noch im Jahr 2012 mit einer indischen Trägerrakete in den Weltraum befördert werden.

Dieses so vielseitig zusammengesetzte Podium versprach eine interessante Diskussion. Die Erwartungen des Publikums sollten nicht enttäuscht werden. Im Anschluss an die Veranstaltung hatten alle Teilnehmer die Gelegenheit, die Diskutanten persönlich kennen zu lernen und sich mit ihnen auszutauschen.

Es bleibt zu hoffen, dass der Weltraum auch in Zukunft im Fokus des Interesses bleibt, zumal für viele gegenwärtige und künftige Bedürfnisse der Erde nur Lösungen unter Einbeziehung von Weltraumaktivitäten denkbar erscheinen.



Prof. Irmgard Marboe repräsentierte unter anderem den National Point of Contact (NPOC) Austria des European Centre for Space Law (ECSL), ist Mitglied des Rechtsunterausschusses (Legal Subcommittee) des Ausschusses der Vereinten Nationen für die friedlichen Nutzung des Weltraums (UNCOPUOS) und war maßgeblich an der Ausarbeitung des österreichischen Weltraumgesetzes beteiligt. Als ausgewiesene Expertin für Weltraumrecht beantwortete sie entsprechende Fragen und eröffnete einen kurzen Einblick in die legislatischen Herausforderungen, die mit der Schaffung nationalen Weltraumrechts verbunden sind.

Prof. Otto Koudelka ist als Projektleiter von TUGSAT-1 für die Entwicklung und den Bau des ersten österreichischen



The 2012 IISL/ ECSL Symposium, 19 March 2012, “Transfer of Ownership of Space Objects: Issues of Responsibility, Liability and Registration”

Irmgard Marboe, Anita Rinner



The traditional symposium, organised by the International Institute of Space Law (IISL) and the European Centre for Space Law (ECSL) at the margins of UN-COPUOS, was held on 19 March 2012 and dealt with the issue of transferring ownership of space objects in outer space. The six keynote speakers were academics and practitioners from universities and international organisations: Armel Kerrest, University of Brest (France); Mildred Trögeler, ESPI; Setsuko Aoki, Keio University (Japan); Martin Stanford, UNIDROIT (Italy); Frans von der Dunk, University of Nebraska (US) and Olavo de O. Bittencourt Neto, University of Sao Paulo (Brazil). The symposium was chaired by the President of IISL, Tanja Masson-Zwaan, and the President of ECSL Sergio Marchisio.

The presentations dealt with various legal aspects of the transfer of ownership of a space object in outer space, most importantly in relation to Art VI, Art VII and Art VIII of the Outer Space Treaty (OST). These articles deal with the issues of authorization and supervision by the “responsible State”, liability of the “launching State” and jurisdiction and control by the “registering State”. All those issues are at stake when ownership over a space object is changed. The presentations pointed out that the OST does not provide a solution for the case of such a change of ownership. It rather rests on the historical noti-

on of “once a launching State, always a launching State”. This does not appropriately reflect today’s actual practice where satellites are bought and sold on a regular basis, in particular by persons or entities with different nationalities. It was pointed out that State practice in registering the transfer of ownership of space objects was very diverse. Three different cases must be distinguished: firstly, a transfer of ownership between owners of the same nationality, which would be the easiest one as far as legal aspects are concerned. Secondly, a transfer of ownership between owners with a nationality of different launching States, where a solution can be found by an agreement between the two launching States. Finally, the most complex one would be a transfer of ownership to a national of a non-launching State, where the space treaties do not provide a solution de lege lata.

The crucial question discussed was if transfer of ownership would lead towards “flags of convenience” in space. According to the Registration Convention, only a launching State can register. Some practitioners claim that passing the ‘hot potato’ to a non-launching State would not be in line with current legal framework, because of the liability regime which currently rests only with launching States. However, it was noted that registration had no direct relevance with regards to liability. The result of the discussion was that there was a need for a more flexible regime in order to facilitate transfer of ownership and to respond to current economic developments in space.

The presentations of the 2012 IISL/ ECSL Symposium can be downloaded from: <http://www.oosa.unvienna.org/oosa/en/COPUOS/Legal/2012/symposium.html>

Exploring Space Law in Vienna - 18 to 21 March 2012

Ntorina Antoni and Dimitra Stefoudi, Students from University of Athens, Greece



From 18 to 21 March 2012, an international group of students, coming from Finland, Germany, Great Britain, Greece, Italy, and Switzerland, as well as Austrian students from the Vienna University of Economics and Business (WU) and the University of Innsbruck had the opportunity to take part in the excursion "Space Law in Vienna" organised by Univ.-Ass. MMag. Dr. Nicole Ehlotzky. Some of us had met at the occasion of the 20th ECSL Summer Course on Space Law and Policy in Rijeka, Croatia.

In those four days in Vienna, we had the chance to follow a very rich academic programme: the opening of the 51st Session of the Legal Subcommittee of the UN Committee on the Peaceful Uses of Outer Space (UNCOPUOS), a symposium organised by the International Institute of Space Law (IISL) and the European Centre for Space Law (ECSL), a visit to the European Space Policy Institute (ESPI), as well as very interesting lectures provided by experts in their field. Most of all, though, the small reunion of future space lawyers, as we enjoyed calling ourselves, under the most appropriate circumstances made "Space Law in Vienna" a very special and unique event.

Sunday, 18 March 2012

The excursion started Sunday afternoon with a "meet and greet" in a restaurant near by the Kuffner-Observatory. After

sunset, to get in the mood for outer space and space law, we made a tour through Vienna's oldest observatory, where more than 100 years ago noted scholars like Leo de Ball and Karl Schwarzschild had investigated the stellar constellations with their refracting telescopes and heliometers. Instructed by the archostronomer Doris Vickers we were allowed to use these ancient instruments and, under a clear sky, observe the Mars and the Orion Nebula.

Monday, 19 March 2012

Opening of the 51st session of the Legal Subcommittee of UNCOUOS.

The opening of this conference took place at the Vienna International Centre (VIC) where the Legal Subcommittee of UNCOUOS held its fifty-first session from 19 to 30 March 2012. At



its 839th meeting, on 19 March, Tare Charles Brisibe (Nigeria) was elected chair for a two-year term in office, pursuant to the General Assembly resolution 66/71. The Subcommittee welcomed the election of the new chair for the period 2012-2013 and expressed its appreciation to the outgoing chair, Ahmad Talebzadeh (Islamic Republic of Iran), for furthering the work of the Subcommittee during his term.

Representatives of the 71 member States, observers for Costa Rica, the Dominican Republic, El Salvador, Israel, Oman and the United Arab Emirates, observers for the European Union, for the International Civil Aviation Organization and the International Telecommunication Union, as well as for ESPI, IISL, the International Law Association and the Space Generation Advisory Council and others attended the session.

At the outset, the chair made a statement in which he highlighted the instrumental role of the Subcommittee in the development and further advancement of the international legal regime governing the activities of States in the exploration and use of outer space over the past 50 years, as acknowledged in the Declaration on the Fiftieth Anniversary of Human Space Flight and the Fiftieth Anniversary of the COPUOS, adopted by the General Assembly in its resolution 66/71 in 2011. Then, the Director of the UN Office for Outer Space Affairs (UNOOSA), Mazlan Othman, made a statement in which she reviewed the role of the Office in discharging the responsibilities of the Secretary-General under the UN treaties on outer space, including the maintenance of the register of objects launched into outer space, as well as the role and work of the Office relating to capacity-building in space law.

The Subcommittee began its consideration of the agenda with statements by the representatives of Ecuador on behalf of the Latin America and the Caribbean Group, Kenya on behalf of the African Group, Austria, China, the Czech Republic, Germany, Japan, the Russian Federation and the United States of America (US).

Last but not least, the Committee paid tribute to the late Carl Q. Christol (US) and Gyula Gál (Hungary), who had left behind significant contribution to the science of space law and the progressive development of international law of outer space.

Introductory Speech by em. o. Univ.-Prof. Dr. Christian Brünner, University of Graz



Prof. Brünner gave a very interesting lecture covering mainly all aspects of space law, in particular a historical overview of the law of outer space, international cooperation in space activities, the structure and function of UNCOPUOS, space-related activities within the UN system, definition and subjects of space law, purposes of space activities, general characteristics of space law and finally the current challenges in this field. While explaining the main purposes of space activities, Prof. Brünner underlined the exploration and utilisation of outer space, in order to meet the terrestrial needs. He also focused on the history of space law, starting from the launch of the first space object in 1957, to the evolution of international organisations related to space, such as the UNOOSA, the ad hoc Committee on the Peaceful Uses of Outer Space, the International Astronautical Federation, the IISL, as well as the European Space Agency (ESA) and the ECSL. He moved on explaining how the race of powers in outer space evolved into international cooperation among States while conducting space activities, followed by a brief mentioning of the five space

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treaties. The lecture continued with a reference to the space-related bodies within the UN and a quite intriguing issue, the definition of outer space and the different techniques applied to define it. In the end, a general overview on the main characteristics of space law (consensus-based decision-making, special regime for responsibility, different levels of regulations etc.) was given, along with a reference to the major current challenge, space debris.

During Prof. Brünner's lecture, the thesis of Anita Rinner, student at the University of Graz, concerning small satellite missions and specifically their economical and political aspects, legal issues and challenges, was presented.

IISL/ECSL Symposium

After this session, on the same day, we attended the symposium on "Transfer of ownership of space objects: Issues of responsibility, liability and registration" which was chaired by Tanja Masson-Zwaan (president of IISL) and Sergio Marchisio (president of ECSL).

The Subcommittee heard the following presentations during the symposium: "Legal aspects of transfer of ownership and transfer of activities", by Armel Kerrest (University of Brest, France); "Practice of States and international organizations in registering the transfer of ownership of space objects", by Mildred Trögeler (ESPI, Austria); "Satellite ownership transfers and the liability of the launching States", by Setsuko Aoki (Keio University, Japan); "UNIDROIT Registration of security interests and the Registration Convention: relevance for the transfer of ownership issue", by Martin Stanford (UNIDROIT, Italy); "Towards 'flags of convenience' in space?", by Frans von der Dunk (University of Nebraska, US); and "Regulatory options for dealing with the transfer of ownership", by Olavo de Bittencourt Neto (University of Sao Paulo, Brazil). Concluding remarks were made by the chair of the Subcommittee and by the co-chairs of the symposium. The papers and presentations delivered during the symposium were made available on the website of UNOOSA. The Subcommittee noted with appreciation that the symposium had constituted a valuable contribution to its work.

IISL/ECSL Reception

On Monday evening, at a reception dinner, we had the chance to exchange views with highly estimated personalities of

space law. Among them the newly elected chair Tare Charles Brisibe, Vladimir Kopal (West Bohemian University, University of Pilsen, Czech Republic), Niklas Hedman (UNOOSA), Armel Kerrest (Universities of Western Brittany and Paris XI, France), and Sergio Marchisio (University La Sapienza of Rome, Italy, and president of ECSL).

Tuesday, 20 March 2012, Visit to ESPI



The second day began outside the VIC with a visit to ESPI, a European think tank established by ESA and the Austrian Research Promotion Agency (FFG), aiming at developing positions and strategies concerning European activities relevant to outer space.

The visit mainly included two presentations by Mr. Peter Hulsroj (Director of ESPI) and Ms. Mildred Trögeler (resident fellow). Mr. Hulsroj first took the floor stating ESPI's mission "to provide decision-makers with an informed view on mid- to long term issues relevant to Europe's space activities". The Institute's main tasks are divided into two categories, namely products and services, as well as assignments. The first one includes among others the Yearbook on Space Policy, published annually by ESPI. Ms. Trögeler followed explaining how ESPI actually works. The Institute's functions are primarily issues related to national policies' agenda and secondarily UN General Assembly reso-



lutions. Both speakers briefly referred to their professional career, the first one having previous experience in the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and ESA, the latter being research associate in the German Aerospace Center (DLR).

The encounter finished with some interesting questions on the historical background of space law on behalf of the Austrian students, along with a quick glance at the Yearbooks Archive on our way out.

Lectures held in the VIC

Univ.-Prof. Dr. Gerhard Hafner, University of Vienna

In the afternoon, Prof. Hafner gave an extended and detailed presentation on the structure of the UN. The numerous issues brought up included the UN organs, their function, the aims and targets of the UN, the respective committees' function, and the role of this international organisation at the global scene. The lecture turned out to be a thorough introduction to the UN system as a decision-making body, providing the attendants with concentrated information on the topic.

Dr. Philip Bittner, Austrian Foreign Ministry

Following the lecture of Prof. Hafner, Dr. Bittner, as a member of the Austrian delegation, firstly briefed us on the recent work of the Legal Subcommittee of UNCOPUOS which had previously elected its new chair and adopted the agenda for the 51st session. He continued with references to rather procedural issues within the Committee, such as the number of States represented, the observers participating, the work of the Secretariat, the alphabetical order according to which the de-

legations are seated, and even the official UN languages and the helpful role of the interpretation cabins. Common as they might sound, these issues seemed interesting to an audience consisting mostly of university students on their first actual contact with the UN. The discussion went on with a brief presentation of the Committee's agenda, including key topics, such as the registration of space objects, transfer of ownership of space objects, "liability" and "damage" under the space treaties, the notion of space debris and the delimitation of outer space. A brief questions & answers session marked the end of another interesting lecture.

Tour in the VIC



Later that afternoon we had the chance of a guided tour through the VIC which mainly hosts the headquarters of the International Atomic Energy Agency (IAEA), the UN Industrial Development Organization (UNIDO), as well as UNOOSA. The tour started with a closer look to a well-constructed miniature of the VIC and its genuine Y-shaped office towers, along with a brief presentation of its history; it ended up in the theatre hall where two very interesting short-films on UN activities and achievements were shown. In the meantime, we passed by conference rooms, numerous offices, exhibitions, UN campaign posters and – most interesting for us – a corner dedicated to a permanent exhibition on outer space.

Wednesday, 21 March 2012

51st session of the Legal Subcommittee of UNCOPUOS

The last day of our programme consisted of attending the third day of the 51st UNCOPUOS Legal Subcommittee session.

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The agenda of the day included various issues, starting from a general exchange of views with inputs on behalf of several delegates. The discussion continued with reference to the outer space treaties, specifically their status and extent of application by the member States. The session also included an update on the work and activities of NGOs and international intergovernmental organisations relating to space law.

Having had the opportunity not only to attend a session of an important UN Committee but also tasting how a delegate's life really is, was definitely an unforgettable experience. On behalf of every participant, a great thank you is due to the Austrian subpoints of contact for space law, Nicole Ehlotzky, Karin Traunmüller and Boris Levtchev, who made this great trip possible.

"Space Law in Vienna"

Remarks and Acknowledgements

Univ.-Ass. MMag. Dr. Nicole Ehlotzky, Senior researcher,
Vienna University of Economics and Business)

There are not many fields where international co-operation has proven as important as in outer space. And it can be assumed that collaboration will continue to gain an increasingly significant role in the further exploration and commercial exploitation of outer space, as well as in the development of space-based technologies.

Vienna has always offered a certain link to outer space. It hosts the "Kuffner-Observatory", one of the most significant observatories of the former Austro-Hungarian Empire, founded in 1883 by Moriz von Kuffner, the owner of the "Ottakring" brewery. More than 100 years after the foundation of the Kuffner-Observatory, the United Nations Office for Outer Space Affairs (UNOOSA) was relocated to the United Nations Office at Vienna in 1993. Besides, another 10 years later, in 2003, the European Space Policy Institute (ESPI) was established in the Austrian capital.

Thus, it was the obvious choice to organise a space law related excursion in Vienna and to provide students an insight into outer space and its law, both from a European and from an international perspective. In order to live up with the internationality of space law and the idea of the United Nations, the excursion should not confine itself to Austrian students,

but also address participants from other countries. Finally, our group consisted of 41 students coming from two Austrian Universities (Vienna University of Economics and Business and University of Innsbruck), as well as from the Universities of Aberdeen (GB), Athens (GR), Cologne (GE), Genoa (IT), Lapland (FL), and St. Gallen (CH). This composition made us experience a certain international atmosphere also within our group, and it revealed some cultural differences, with all their advantages and disadvantages.

Participants' knowledge in space law differed. Especially those who already had attended the "Summer Course on Space Law and Policy", organised by the European Centre for Space Law (ECSL), were well grounded and had the opportunity to deepen their knowledge. Others took the chance to get a glimpse of this field of law and on how a Legal Subcommittee meeting takes place at the United Nations. After all, the excursion expanded our (legal) horizon by showing that space law, indeed, involves also many terrestrial aspects of practical impact. It enabled us to build up close ties for possible future co-operations, within our group as well as with scientists and experts working in the field of space law.

Finally, I would like to convey my thanks and gratitude to those persons who made this excursion a success and supported me in all respects, especially to the lecturers em. o. Univ.-Prof. Dr. Christian Brünner (University of Graz), Univ.-Prof. Dr. Gerhard Hafner (University of Vienna) and Dr. Philip Bittner (Austrian Foreign Ministry); as well as Mr. Peter Hulsroj and Ms. Mildred Trögeler (ESPI), and the team of the Kuffner-Observatory, in particular Ms. Doris Vickers. For their organisational support I would like to thank Prof. Dr. Sergio Marchisio as well as the team of UNOOSA, especially Mr. Niklas Hedman. Furthermore, I am indebted to ao. Univ.-Prof. Dr. Irmgard Marboe (University of Vienna and NPOC), and my colleagues and Austrian "subpoints" MMag. Karin Traunmüller (University of Vienna) and Dr. Boris Levtchev (University of Salzburg) for their overall support and enthusiasm in all space law matters, making it a great pleasure to work in this field. Last but not least, I would like to thank all participants – the next generation of "space lawyers" – who made this excursion a very unique experience.

Workshop on ESA Enlargement, 23 March 2012

“What Interested Countries Can Do to Prepare Themselves for Ultimate Accession”

Boris Levtchev

On 23 March 2012, a workshop on the topical issue of ESA enlargement took place at the European Space Policy Institute (ESPI) in Vienna. Peter Hulsroj, Director of ESPI, welcomed guests and speakers from different departments of ESA, the Austrian Research Promotion Agency (Harald Posch) and representatives of institutions in mostly Central and Eastern European countries, namely Estonia, Czech Republic, Romania, Poland, Slovenia, Latvia, Lithuania and Slovakia.

First, **Peter Hulsroj** addressed the question, whether the scientific communities are ready to join the “club” of ESA and what role the industry of the new members will play. Harald Posch reported about Austria’s experiences in that field, which joined ESA 25 years ago. He stated that joining ESA had several reasons, on the one hand economic, because new jobs were created in an area expected to be stable during crisis, on the other hand of course scientific reasons allowing research in an area of inspiration. Austria had to learn a lot about ESA and had to set priorities in order to manage its participation in ESA, which often is characterised as a “complicated beast” not entirely explainable.



Ene Ergma, President of the Parliament and Chairman of the Estonian Space Committee, an astrophysicist, presented her views illustrating that space has never been so close in history as today, calling it the “fourth dimension” of our world. She emphasised the importance of space especially for education, seeing a chance therein to bring young people back to natural sciences. For these reasons, it was also important to support new technological trends on the national level and to assure the informing of a wider public.

Anabelle Fonseca from the International Relations Department of ESA reported that, in June 2011, the ESA Council decided to invite all the EU Member States which are not members of ESA to attend ESA Council meetings as observers and that all 10 countries had started to attend these meetings since October 2011. After respective requests and negotiations, a number of cooperation agreements were concluded paving the way for the so called “PECS” (Plan for European Cooperating States) designed to help European countries, particularly those that joined the EU after 2004, to join ESA. PECS already provides participation possibilities in mandatory and optional programmes on the way to a full ESA membership.

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Bernard Zufferey, PECS Manager at ESA, described the history and goals of PECS and showed that PECS, which became operational in 2003, is an intermediate step on the way to membership of ESA of CEE countries. PECS' key objectives were the association with ESA programmes and activities and the preparation for possible future accession to the ESA Convention in the most efficient manner. PECS covers space science, earth observation, telecommunication and navigation, life and physical sciences, space technology and ground segment engineering and utilisation. Two instruments in this process are EMITS (Invitation to Tender database of ESA) and the TRL (Technology Readiness Level – a scale as a way to measure the maturity of technology).

The other ESA speakers made presentations on "Integrated applications as a new opportunity" (Pierluigi Mancini, Head of the Awareness Activities and Feasibility Studies Division at the Integrated and Telecommunication related Applications Department at ESA), on the "ESA Corporate Education Programme" (Hugo Maree, Head of the Education and Knowledge Management Office at ESA) and on the "ESA National Trainee Scheme" as an opportunity for engineering / science graduates from non-ESA EU countries to receive on-the-job training on space technologies funded by National Entities (Fernando Maura, Head of the ESAC Human Resources Service at ESA).



The second session discussed accompanying processes. Guy Duchossois, former ESA Earth Observation satellites Mission Manager, presented the Initiative for Space Promotion and



Education implementing retired ESA staff in space promotion activities. Gilles Maquet from the ESPI General Assembly discussed the question why space industry is willing to contribute to the enlargement process and how the industry is acting to accompany. Furthermore he informed about the concept of the European Space Policy and the new EU Space competence.

Chiara de Caro, General Manager of the European Trade Association for Business Angels (EBAN) talked about individual investors in the space sector, business angel networks and matching processes. Business angels matching service, start up financing, technology and Innovation and growth/expansion financing were also topics of Bernd Litzka of the Austrian Business angels matching service.

The third session dealt with opportunities and challenges for non-member States. All speakers were representatives of different institutions in Central and Eastern European Countries.

Karel Dobeš, Government Commissioner of the Ministry of Transport in the Czech Republic informed that the Czech Republic's way to ESA started in 2007 by a respective request to accede to the ESA Convention. The competence for space activities in the Czech Republic was split into different competences at the Academy of Sciences, the Ministry of Transport and the Ministry of Industry & Trade, but today the Ministry of Transport plays the most important role as coordinator of space related activities.

Marius-Ioan Piso from the Romanian Space Agency stated that Romania became the 19th ESA Member in 2011. Roma-

nia had been in a continuous process of ESA integration since 1992 and had European Cooperation State status since 2006. Romania featured a variety of space related activities in the last years.

Anna Nałęcz-Kobierzycka, Chief Expert of the Economy Development Department of the Ministry of Economy of Poland showed the Polish perspective. The long cooperation of ESA and Poland started in 1994 by concluding the first cooperation agreement. The second followed in 2002, PECS in 2007. Currently, Poland is negotiation accession. In the framework of the PECS agreement, 20 projects were approved for realisation in 2007 and 2008. In 2008 / 2009, 11 projects were approved. Nałęcz-Kobierzycka commented on the PECS procedure describing it as “complicated, but useful” and called for more promotion activities on the national scale.

Tomaz Rodič, Director of the Slovenian Centre of Excellence for Space Sciences and Technologies, talked about space technology, Slovenian resources in space and on the ground and about Slovenia’s cooperation with Estonia, Lithuania and Sweden. Finally, he presented the concept of a Slovenian micro satellite for remote sensing applications.

Madis Võõras, Head of Space Office and Advisor for Technology and Innovation Enterprise Estonia, informed about Space Governance and Space Policy in Estonia and about the cooperation with ESA which started in 2006. In 2007, Estonia concluded a cooperation framework agreement with ESA, in 2009 a European Cooperating State agreement was signed in Tallinn, in 2010 the PECS Charter was signed.

Kaspars Karolis from the Ministry of Education and Science of Latvia gave a short overview on the history of Latvia’s cooperation with ESA which lead to a cooperation agreement signed in July 2009. Latvia is developing space sector guidelines for 2013-2018 in space and technology research. A government action plan was approved in February 2012 involving several Latvian ministries. Karolis sees some problems regarding the low awareness of space benefits, the low business and research activity, insufficient funds etc, but he also reported about an active joint satellite project (QB50).

Vidmantas Tomkus, Director of the Lithuanian Space Association, presented his view on what interested countries could

do to prepare themselves for ultimate accession. He discussed space economy’s value added chain, down stream services and up stream technologies and informed about the FP7 Nanosatellite project “QB50”, a network of fifty CubeSats for atmospheric research and in-orbit demonstrations in low-earth orbit.

Finally, **Marta Cimbáková**, Director General of S&T Division at the Ministry of Education, Science, Research and Sports of the Slovak Republic showed the Slovak pathway towards ESA. Slovakia signed a cooperation agreement with ESA in 2009, organised the workshops “Slovakia on the path to ESA” and “Aerospace & ITS Cooperation platform” and issued a “Call for ideas” for the fields science, engineering and education. Furthermore, Slovakian representatives are attending ESA meetings and deepening cooperation with ESA. These processes involve industrial and educational stakeholders. Cimbáková shortly talked about the Slovak Organisation for Space Activities, which inter alia prepares a CubeSat within the EU FP7 project “QB50”.



The sessions at the Workshop on ESA Enlargement were followed by a “Roundtable discussion on the potential way forward”. At the end, Peter Hulsroj contributed his concluding remarks, which completed a very interesting and informative workshop on one of the most important space-related topics in Europe.

See all presentations of the workshop at:
http://www.espi.or.at/index.php?option=com_content&view=article&id=792%3Aesa-enlargement-workshop-23-march-2012&catid=44%3Apresentations&Itemid=1

6th Annual Spring Space Law Conference University of Nebraska College of Law, 20 April 2012

Irmgard Marboe

6th Annual Spring Space Law Conference

**University of Nebraska College of Law
Hamann Auditorium**

„The development of international space law, in particular
in its infant stages, and the role of customary and soft law“
(keynote)

Dr. Peter Jankowitsch

„General principles of law versus soft law in the space
domain“

Peter Hulsroj

„Compliance or non-compliance with soft-law instru-
ments: a real choice for space operators?“

Dr. Irmgard Marboe

„The 1996 Declaration on Space Benefits and Customary
International Law“

Brian Lepard

„Soft law and space law in the context of space debris
mitigation: an ongoing case study“

Frans von der Dunk

„Customary law in the context of
anti-satellite weapons“ (working title)

David Koplou,

„Soft law, customary international law and the use of force
in outer space“ (working title)

Jack Beard



The University of Nebraska-Lincoln is internationally renowned for its Space, Cyber and Telecommunications Law Program. It is situated in the Midwest of the United States, only a 50 minutes drive from Omaha, the home of US Strategic Command that oversees the Joint Functional Component Command (JFCC) for Space. The annual Spring Space Law Conference brings together experts and practitioners of space law for a high-level exchange of ideas and for discussing pertinent questions with interested participants, including students.

It is notable that the Spring Conference not only gathers participants from the United States where there is self-evidently a high level of expertise in space law but that it has always strived for an international composition and taken care of inviting speakers from Europe. Perhaps this is due to the European-American connection incarnated by Prof. Frans von der Dunk, formerly professor at the University of Leiden (Netherlands), who joined the faculty in Lincoln in 2008. Strengthening this European-American cooperation was behind the idea of organising the 2012 Spring Conference together with two European institutions, namely the European Space Policy Institute (ESPI) and the Austrian National Point of Contact for Space Law Austria (NPOC Austria) located at the University of Vienna.

The topic of the conference was inspired by two preceding academic endeavours: firstly, by a book published by **Brian Lepard**, Law Alumni Professor of Law at University of Nebraska-Lincoln College of Law, entitled "Customary International Law. A New Theory with Practical Applications" (Cambridge University Press 2010), in which the author develops a new definition of custom placing the emphasis firmly on opinion iuris and suggesting a more refined understanding of the level of proof to demonstrate the existence of the conviction of States about the desirability of an authoritative rule of law. The second source of inspiration was the conference on "Soft Law in Outer Space – The Function of Non-binding Norms in International Space Law" in April 2011 in Vienna (see Austrian Space Law Newsletter no. 11/June 2011, p. 26-28), followed by the publication of an edited volume under the same title (edited by Irmgard Marboe, Böhlau Verlag 2012).

These two initiatives dealt with the same phenomenon of the legal framework of international activities, the lack or/and inadequacy of written norms of international law. The working title of the 2012 Nebraska Spring Conference was thus „Customary Law and Soft Law-aspects of the regulation of Outer Space“. In the area of outer space, the elaboration and adoption of treaties concerned with regulating State conduct has ended with the 1979 Moon Treaty. Since then, no further treaties have been negotiated. Nevertheless, space activities have continued to develop at an enormous pace, the actors have diversified and increased, but the written regulatory framework has not been adapted. Therefore, alternative ways of regulation emerged. In the framework of the United Nations, non-binding General Assembly Resolutions with only recommendatory nature have become the preferred normative instruments. In addition, a number of international "Guidelines" have been developed, mainly for the purpose of mitigating space debris. Furthermore, "Codes of Conduct" have started to play an increasing role.

To analyse the relevance of these kinds of instruments and the respective behaviour of States was at the core of the 2012 Spring Conference. As the keynote speaker, **Peter Jankowitsch**, former Minister of Foreign Affairs of Austria and longstanding former chairman of UNCOPUOS, set the scene with an instructive talk about "The development of international space law, in particular in its infant stages, and the role of customary and soft law". After him, **Peter Hulsroj**,

the director of ESPI, held a talk about „General principles of law versus soft law in the space domain“. He emphasised the importance of international cooperation and the need for an increased acceptance of the limitation of State sovereignty for the benefit of a functioning international legal order. In this context, he pointed upon the weaknesses and the outdated argumentation of the Lotus-Case (France v. Turkey) of the Permanent Court of International Justice in 1927 which are as yet not totally overcome.

The presentation on „Compliance or non-compliance with soft-law instruments: a real choice for space operators?“ by **Irmgard Marboe** of the University of Vienna concentrated on the possible legal consequences of non-compliance with international non-binding norms. She pointed out that even in the absence of a legally binding force, non-binding instruments can have an important impact in the assessment of due diligence required in the conduct of outer space activities. This may have important repercussions for the establishment of liability in case of damage.



Brian Lepard presented his attempt of adapting his new theory on customary international law mentioned above with regard to „The 1996 Declaration on Space Benefits and Customary International Law“. He came to the conclusion that this declaration provides a good example of the formulation of ethical principles at the international level, as it demands from States, for example, to conduct their space activities for the benefit of all States, taking into particular account the need of developing countries, and to make good faith efforts to ensure that space-related agreements are fair and reasonable.

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Frans von der Dunk of the University of Nebraska concentrated on the issue of „Soft law and space law in the context of space debris mitigation: an ongoing case study“. He analysed different existing international guidelines on the mitigation of space debris (eg by the Inter-Agency Space Debris Mitigation Committee IADC, or by the UN Committee for the Peaceful Uses of Outer Space, UNCOPUOS) and demonstrated the lack of political will of States to accept any binding rules in this area. The reasons for this reluctance include the general fear of reducing sovereignty and the more specific concerns in relation to the future development of space technology which should not be unduly restricted.

The military use of outer space was at the centre of discussion in the last part of the conference.

David Koplow, director of the Center for Applied Legal Studies, Georgetown University, dedicated his talk to „Customary law in the context of anti-satellite weapons“, analysing primarily the legal implication of the Chinese anti-satellite test in 2007. This triggered a lively debate with the public about whether this test was unlawful under current international law or not. While some participants maintained that the test had not violated any internationally binding legal norm, at most some non-binding guidelines on space debris, others

maintained that Art. IX of the Outer Space Treaty (providing that space activities shall be conducted “with due regard to the corresponding interests of all other State parties”) already provided a sufficient legal basis to prohibit such a deliberate destruction of a satellite and the creation of massive space debris. The discussion was complemented and rounded up by **Jack Beard**, University of Nebraska-Lincoln, in his presentation about „Soft law, customary international law and the use of force in outer space“.

The 2012 Spring Space Law Conference has provided an interesting platform for European and US scholars to exchange their ideas on the importance of customary law and soft law in outer space. The insightful analyses lead to an interesting discussion about the communalities and differences of these two types of norms of which the former is legally binding but not written, and the latter is written but not binding. The specific feature of the conference was that, due to the good contacts of the University of Nebraska College of Law to practice and industry, these thoughts could be shared and discussed with a number of distinguished practitioners and interested students in the audience which widened the horizons of both sides.

Seminar on Space Law and United Nations Simulation at the University of Graz, 2 - 12 May 2012

Anita Rinner

Between 2 and 12 May 2012, the annual seminar on space law and space policy was held by Prof. Christian Br nner and Mag. Alexander Soucek (Programme Co-ordinator in the Directorate of Earth Observation Programmes at ESA) at the University of Graz.

The seminar was divided into two parts. The first part, taught by Professor Br nner, provided an overview of the main legal, political and economic aspects of space law. He presented a brief historical survey about the key events of space activities.





Additionally, he introduced cultural and philosophical approaches towards space exploration. His presentation focused on space applications, such as navigation, telecommunication and Earth observation.

In the second part of the seminar, Alexander Soucek taught the students technical and practical aspects of space law. He put his focus on regulatory issues like data policy, frequency allocation or the high value of the geostationary orbit, and went into details regarding launchers, nuclear power sources, space debris or the International Space Station. In addition, he drew the attention to some institutional aspects and gave insights into the work of ESA, NASA and UNCOPUOS.

The seminar was assisted by Hannes Mayer and Anita Rinner, who created twelve case studies concerning the main legislative principles with regard to outer space. The aim of those case studies was to examine the scope of the Outer Space Treaty, as well as the Rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Agreement. The highlight of the seminar was a United Nations simulation, prepared by Alexander Soucek. He accurately prepared a meeting of the United Nations on a treaty adoption based on the consensus principle. Participants were divided into teams representing various States, such as the United States of America, the Russian Federation, the People's Republic of China, the Republic of India, the Maldives, Albania, Iran, United Arab Emirates and finally the European Union as a supranational organisation.

The teams had to agree upon a basic international treaty for the implementation of a climate monitoring satellite system.

The draft text for negotiation contained highly controversial suggestions, such as technology sharing, equal commitments or free data sharing policies. In accordance with additional secret information provided, all participants had to act in line with their governments' "real life policies" and eventually realised how difficult it was to find a consensus among all parties. Additionally, a fictional UN Conference Bureau had to elaborate rules of procedure. During the simulations, some unexpected (yet carefully planned) difficulties irritated the parties who had to react with bilateral consultations.

The main aim of this simulation, as initiated and realised by Alexander Soucek, was to create a situation as close to reality as possible. The students were excited about this task and contributed with wit and knowledge during the entire session. However, in the end they were not able to find any consensus. Thus, they presented to the "media" a mere political statement of two sentences, noting that the topic was important and that a decision would be found in a future meeting of States. After this outcome, a student recapitulated: "I would have never believed how difficult it is to agree upon one single sentence in a particular document." However, this goes straight to the point of carrying out such simulations: students should figure out that different interests and cultural backgrounds make it difficult to find a consensus and necessitate to learn a lot on the art of compromise. Overall, the students very much enjoyed the four hour simulation and all agreed upon one thing: "It is really exciting but also really difficult to act on the international stage!"



“In Heaven as on Earth? The Interaction of Public International Law on the Legal Regulation of Outer Space” Cologne, 1 - 2 June 2012

Irmgard Marboe

Within the framework of its ambitious project on the “Cologne Commentary on Space Law – CoCoSL”, the German Centre for Air and Space (Deutsches Zentrum für Luft- und Raumfahrt, DLR), together with the Institute of Air and Space Law at the University of Cologne, came across the problem of identifying the nature and place of space law.

At the beginning of the “Space Age”, States were the only actors carrying out activities in outer space. It was therefore evident that the regulatory framework was public international law, first based on customary international law, then on treaty law. However, with increasing privatisation and commercialisation in the end of the 20th century, also private actors entered the scene and the role of space agencies, formerly merely State entities, has changed. Has this also changed the nature of space law as a branch of public international law? Is the *corpus iuris spatialis* still public international law or has the nature of space law changed in the past decades? Has it developed into an independent legal order with its own principles and parameters? As there are quite a number of legal instruments regulating activities in outer space and various national and international entities involved, the legal situation is quite complex and an easy answer seems not to be readily available.

The Cologne conference on “In Heaven as on Earth? The Interaction of Public International Law on the Legal Regulation of Outer Space” dealt with these questions during an intensive two-day conference. As a starting point, the organisers recalled that Article III of the Outer Space Treaty establishes that activities in the exploration and use of outer space shall be carried out “in accordance with international law”, with specific reference to the Charter of the United Nations. Moreover, Space Law itself has developed as a very specific branch of public international law. Nevertheless, it is not specified enough to include all possible legal aspects of space activities. Therefore, resort to other existing rules is necessary. In accor-



dance with Article III of the Outer Space Treaty, solutions to unresolved questions should be found in accordance with international law. These may be found either in treaties, in customary law or by the application of general principles of law (all three are sources of public international law, according to Article 38 of the Statute of the International Court of Justice). In view of the range of space activities, many aspects of public international law - including the Law of the United Nations Charter, International Environmental Law, International Trade Law, International Humanitarian Law, or International Human Rights Law – may be relevant. The conference showed that it was important to understand how these areas of public international law may interact with Space Law.

A number of experts in different specific fields of public international law were invited to explore in their presentations if and to what extent the rules and principles of these specific fields are applicable to activities carried out in outer space. In addition, some experts in space law should bridge the gap between those diverse fields of public international law with space law.

The key note address was given by **H.E. Judge Abdul Koroma** who presented “The Breadth of International Law” and discussed the broad range of general international law

issues that may be legally relevant for the space activities. Ram Jakhu, Mc Gill University, Canada, then gave an introduction of the fundamental principles of space law, most importantly represented in Articles I, II, III, IV, VI and VII of the Outer Space Treaty as well as the Registration Convention, and on how general public international law may be relevant ("The Fundamental Principles of Space Law and the Relevance of International Law").

The first "external" expert was **Thilo Marauhn**, Justus Liebig University Gießen, Germany, who spoke about "Articles III and IV Outer Space Treaty and the Jus ad Bellum / Jus in Bello". He gave an overview of the general principles of jus in bello and jus ad bellum as they may apply to the military uses of space, and made references to relevant treaties and weapons limitation instruments and initiatives. Alan Boyle, University of Edinburgh, gave an "Overview on the development of general International Environmental Law" and discussed general principles of international environmental law, particularly as they may apply to global commons or areas of global concern. He made references to UNCLOS, Kyoto Protocol, and customary international law. Another expert in environmental law, Yaw Nyampong, Mc Gill University, Canada, spoke about "Environmental protection in outer space with special regard to space debris". He made a description of the problems associated with, in particular, space debris, the current legal framework for regulation, the various "soft law" mitigation guidelines and what needed to be done.

Stefan Kadelbach, Goethe Universität Frankfurt am Main, Germany, presented "The Concept of State Responsibility for Private Acts under General International Law" and discussed how, under the general principles of international law, acts by private actors might be imputable to States. He emphasised the relatively narrow circumstances where this might apply (at

least under customary international law), with reference to the ILC Draft Articles on the International Responsibility of States. State responsibility was also the subject of Jean-Francois Mayence, Belgian Ministry for Foreign Affairs, who discussed the commercialisation of space and the participation of non-State actors. He showed how the space Treaties deal with this, the trends of national law and the commercial pressures that may require further regulation ("The concept of State Responsibility for Private Space Activities"). Finally, a rather original ap-



proach was taken by **Irmgard Marboe**, University of Vienna, who explored on some "Human Rights Considerations for Space Activities". In her talk, she focused on the right to impart/receive information, the right to privacy and the right to development, and analysed to what extent these rights might be favoured or endangered by the space activities.

In their concluding remarks, **Stephan Hobe**, University of Cologne, and **Steven Freeland**, University of Western Sydney, on behalf of the organisers, summarised that space law continued to be a branch of public international law and that it was necessary to reflect this appropriately when assessing the legal aspects of space activities. The main principles existing and being developed in several specific areas of international law have also to be taken into account. A specialisation in space law does not prevent from learning and understanding public international law in general and from the need to take into appropriate consideration also its specific specialised areas.



EINBLICK *insight*

Graz – Space Capital of Austria and Small Satellites

Michaela Hinterholzer

In 2011, Graz demonstrated that it deserves the title “Space Capital of Austria” by hosting two important events in the field of space law and technology, starting with the nine week “Space Studies Program” organised by the International Space University (ISU), which was followed by the UN/Austria/ESA Symposium on Small Satellite Programmes for Sustainable Development.

The ISU’s “Space Studies Program”, hosted by the Graz University of Technology lasted for nine weeks between July and August and gave students as well as practitioners the opportunity to profit from this international cooperation in the field of space technology and space law. The programme covered the most important space-related fields, in the technical as well as in the non-technical areas. The topics included space system architecture and mission design, space life sciences, space business and management, space policy and law or space and society, to name just a few.

The “Space Studies Program” is a career stepping stone, as it allowed 119 participants from 21 countries to learn more about space related fields. Professors included Jordi Puig-Suari from the California Polytechnic State University, Rei Kawashima, Secretary General of the University Space Engineering Consortium, Shuang-Nan Zhang from the Chinese Academy of Sciences and Irmgard Marboe from the University of Vienna. As Mart Vihmand, participant of the summer programme put it: “SSP definitely broadens one’s view to all directions and will give the boost in personal endeavors as well as in career. But perhaps the most important and valuable aspect participating at ISU SSP is being part of a true global space community.”

One of the highlights of the programme was the launch of self-made rockets by students of the ISU on 13 August 2011 in a park in the middle of Graz.



The second international encounter was the United Nations/Austria/ESA Symposium on Small Satellite Programmes for Sustainable Development, which was also hosted by the “European Capital of Culture” Graz, from 13 to 16 September 2011. The Symposium was organised under the framework of the United Nations Programme on Space Applications, which supports capacity building in basic space technology and tries to foster the use of space technology and its applications for sustainable development.

The overall headline of this symposium concerned the topic of „Implementing Small Satellite Programmes”, which gave 102 space professionals the opportunity to present their current projects in the field of nano- and small satellite missions, to engage in workshop-style sessions and to promote international cooperation.



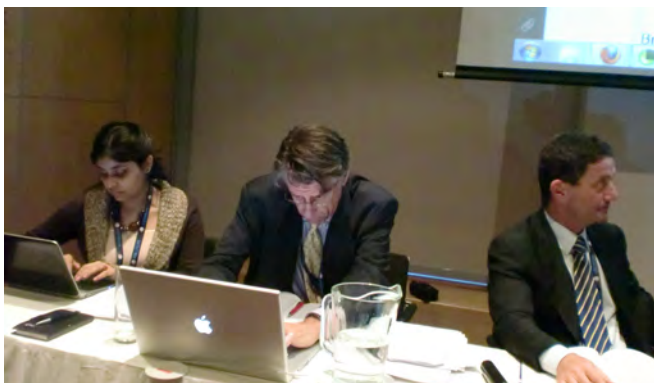
See for further information :
<http://www.unoosa.org/oosa/en/SAP/bsti/isu-ssp2011.html>

The International Astronautical Congress – The World’s Leading Space Event

Michaela Hinterholzer, Irmgard Marboe

The International Astronautical Congress takes place every year for one week, since 1950. It is an open congress and allows experts from industry, space agencies, consultancies and universities, as well as students and practitioners to be part of the international space community and to exchange information regarding recent developments in the space field. The International Astronautical Congress is organised by the International Astronautical Federation together with the International Academy of Astronautics and the International Institute of Space Law.

In 2011 the International Astronautical Congress, took place on the African continent for the first time in history. It was hosted by South Africa in the beautiful city of Cape Town under the heading “African Astronaissance”. Due to this focus, many presentations concerned Africa’s achievements and possibilities in the space industry. Plenary discussions were held, for instance, on “South African and African Space Activities” and “Monitoring Fresh Water from Space with a Focus on Africa”. Various technical sessions discussed topics including “Africa: Space Law and Applications – Past, Present, and Future”, “History of South African Contribution to Astronautics” or “National and International Space Policies and Programmes for African Development”.



In general, each International Astronautical Congress covers a “Technical Programme”, in which papers written by internatio-



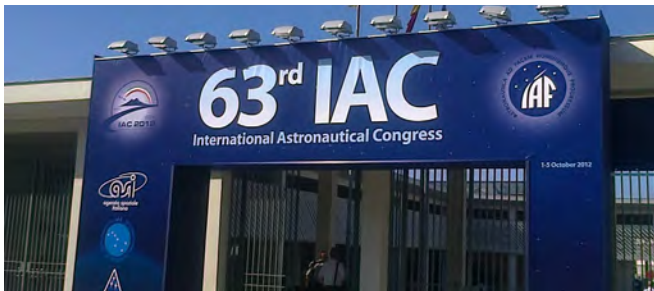
nal experts are presented and discussed. It moreover includes a “Public Programme” with plenary discussions and an “Exhibition”, where various organisations and industries can present themselves and take the opportunity to engage in cooperation and networking.

The programme of last year’s 62nd International Astronautical Congress was intended to cover topical issues in very different scientific fields, starting from technological aspects to biological and physiological effects of space on the human body and furthermore included discussions on the necessary economical and legal background.

The legal issues were mainly represented by the 54th IISL Colloquium on the Law of Outer Space and included issues covering outer space environment, liability of private commercial space flight, space armament or recent developments.

The presentation by Prof. Marboe on the need of national space legislation was prominently reflected in the local media (“Houston, we have a problem – space law vacuum delays lift-off”, Cape Times, 5 October 2011). The congress also offered a student and young professional programme and was a parallel event to the Manfred Lachs Moot Court Competition, in order to ensure that the new generation of space lawyers is a part of this conference.

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In 2012, the International Astronautical Congress was hosted in Naples, the capital of the Campania Region in southern Italy. The general theme was "Space Science and Technology for the Needs of All" which underlined the International Astronautical Federation's remit concerning space applications. The aim was to look into the future and into how that future would be increasingly tied to space, in the interest and for the welfare of all.

The 55th IISL Colloquium on the Law of Outer Space which was part of the "Technical Programme" contained numerous highly interesting and topical presentations. The "Nandasiri Jasentulyana Keynote Lecture on Space Law" was given by Prof. Sergio Marchisio from the University of Rome, La Sapienza. He presented the three most recent initiatives on space debris mitigation and transparency and confidence building measures for outer space activities: first, the new agenda item of the Scientific and Technical Subcommittee of UNCOPUOS on "Long-term Sustainability of Outer Space Activities" which, according to the workplan, is supposed to present concrete results in 2014; second, the International Code of Conduct for Outer Space Activities which has been launched by the EU and which has been discussed and negotiated in a broader context in the past months; and third, the UN General Assembly's Group of Government Experts (GGE) on Space Transparency and Confidence Building Measures (TCBMs), which consists of 15 highly experienced and recognized international experts on space which will present its first draft report in 2013.

The "Young Scholars Session" showed interesting new approaches on the delimitation of outer space, on planetary protection and on the duty to warn in case of natural disasters. The "Protocol to the Cape Town Convention on Matters Specific to Space Assets" which was adopted in March 2012 in Berlin was the subject of insightful presentations concerning the

interaction between private international law and space law and its impact on commercial space activities. Another focus of the IISL Colloquium was the place of international space law within the broader scope of public international law. The presentations dealt with a number of issues of public international law relevant for the conduct of space activities, such as matters of treaty interpretation, the creation of customary law, the concept of "due diligence", State liability for hazardous activities, dispute settlement as well as specific aspects of the law of the Sea and international humanitarian law.

The session on "Recent Developments in Space Law" included a variety of topics, such as legal issues presented by hosted payloads, national space legislation, developments after the World Radio Conference (WRC) of January/February 2012, new concerns regarding space debris as well as legal challenges posed by nano satellites. A joint IAA/IISL Scientific-Legal Round Table dealt with technical and legal issues of optical communications and discussed the position of the ITU in this regard.

A highlight of the IAC 2012 was the Plenary on "International Initiatives for the Safe and Sustainable Use of Outer Space" which brought together internationally renowned experts from China, France, India, Italy, Germany, Japan, Nigeria and the United States to discuss international initiatives currently undertaken for ensuring the safe and sustainable use of outer space. The international initiatives for space debris mitigation and transparency and confidence building measures which have also been the subject of the "Nandasiri Jasentulyana Keynote Lecture on Space Law" by Prof. Sergio Marchisio mentioned above currently attract a lot of attention. It is very clear, and the focus of the IAC 2012 has underlined this once more, that there is an urgent need to act and to establish rules in order to preserve outer space as an environment which can safely be utilized also by the generations to come.



Diploma Thesis: A new Approach Towards Outer Space- “Democratisation”? Legal, Political and Economic Issues Concerning Small Satellite Missions

Anita Rinner, graduated at University of Graz

Recent developments of small satellite technology have brought about Nano- or Cubesatellites which are rather small spacecraft, sized not bigger than a shoe-box and mostly weighing less than 10kg. They have increasingly conquered outer space.

However, small satellites are not brand new. Even the first artificial satellites sent into space were fairly small, equipped with simple and inflexible payloads. In contrast, today’s small satellite missions operate on a high and very flexible level, using manifold and rather complex payloads. A new era of hi-tech small spacecraft has started. Small satellites can be launched into outer space carried piggyback as secondary payload on a launch vehicle at usually relatively low cost.

The diploma thesis examines how small satellites would enable developing, emerging and non-space faring countries to participate in outer space activities on low budget. Additionally, it focuses on the benefit of small spacecraft as a result of less production time and reduced risk of loss. As far as the political aspects are concerned, two main issues are to be closely examined: is it possible to talk about a process towards outer space-“democratisation”? Are small satellites the solution to enable numerous governmental and non-governmental entities to enter outer space? And, in which way would those entities benefit from a “democratised” space?



Regarding the legal aspects, the legal nature of small spacecraft itself will be accurately examined. There are a number of legal issues that have to be taken into account, such as state responsibility, state liability and registration of a small satellite. In addition, the benefits and economic values of small satellites, as well as the current main issues such as space debris mitigation will be faced. Other aspects, such as intellectual property rights, contracts, insurances and frequency coordination, are also taken into account, as those are current legal and regulatory issues concerning small satellite missions. To sum up, the thesis intends to reflect the idea of a “democratised” outer space and to provide a clear overview of the legal and regulatory aspects concerning small satellite missions.

20th ECSL Summer Course on Space Law and Policy and The Story of How to Become a “Spice” Lawyer 29 August - 9 September 2011, Rijeka/Croatia

Anita Rinner



The annual Summer Course on Space Law and Policy organised by the European Centre for Space Law took place from 29 August to 9 September 2011 at the Faculty of Law in Rijeka/Croatia. In total, 36 students from ten different countries within and outside Europe took part in this highly ambitious summer school event. About 24 experts such as university professors, lawyers, scientists, economists, and representatives of international organisations, all concerned with space affairs, gave interesting presentations.

Participating in this course gave everyone a unique chance to meet professionals in order to discuss on-going and current space related issues.

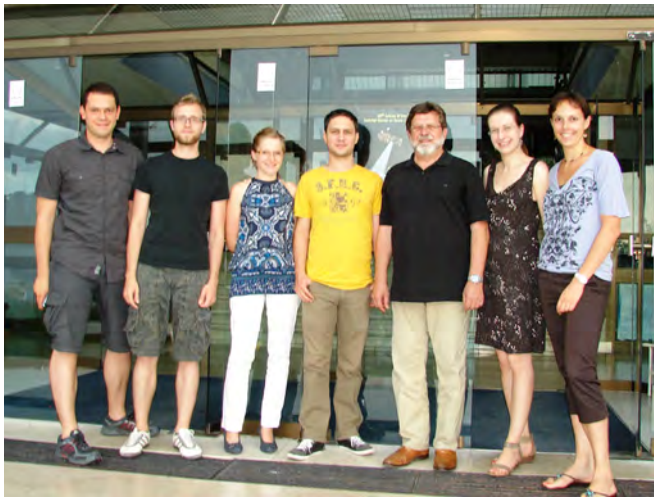
The schedule of the summer course was composed of space law and space policy related issues, such as sources of space law, in particular the UN treaties and resolutions, the definition and delimitation of outer space, as well as contractual and procurement aspects. As far as institutional aspects are concerned, the role and the work of UNCOPUOS, the Internatio-

nal Telecommunication Union (ITU) and ESA were presented by their respective representatives. Eventually, practical issues and challenges in relation to space transportation, the use of the geostationary orbit, manned spaceflight, the use of nuclear power sources in outer space and space debris mitigation were raised by experts in these fields.

In addition to the well prepared and highly informative presentations, all students had to work out a project in response to a call for papers on the topic of “A third Space Project for strengthening the European Space Policy”, presented by Prof. Philip Achilleas, Université XI Paris. The topic was provided at the beginning of the course, and the students had to work on it after each daily session. In addition to the exchange of results, the students had to present their papers in a Moot Court competition in order to defend their research in front of a jury at the end of the entire course. Each team consisted of five students from different countries and was assisted by a highly qualified tutor. Eventually, the best team project, the best orals and the best written papers were honoured. The winning teams received prizes, such as the brand new ECSL book

The Astronauts and Rescue Agreement. Gabriel Lafferranderie and Sergio Marchisio (Eds.), published by the European Centre for Space Law in 2011.

In accordance with the ECSL rules, Austria was able to send five students, selected by the NPOC Austria: Karin Traunmüller and Herwig Wutscher (University of Vienna), Anita Rinner (University of Graz), Nicole Ehlötzky and Philipp Winkler (University of Innsbruck) and Boris Levtchev (University of Salzburg).



All in all, it was a great experience for all participants to have taken part in such an international event. They got an insight of how international institutions work and how individuals deal with particular fields of space law. They were able to improve their language abilities and got in touch with professionals from various space related disciplines. In addition, one of the main challenges was to deal with the projects because of the need to work with people from different national and cultural backgrounds. This provided a great chance to strengthen social skills, which is inevitable when dealing with international relations.

Additionally, the Faculty of Law organised a sightseeing tour in the city centre of Rijeka which was a heavily disputed hot-spot during WW II. The aim of this tour was to increase social and cultural knowledge. Nowadays, the city centre of Rijeka calls itself "The City of Tolerance". This image has proved to be true in reality as we were faced every day with friendly, open-minded people and their sincere hospitality.

Some of the group had a nice experience on the daily bus rides to the faculty in the morning. One day, a group of locals asked what we were doing here in Rijeka, since they had seen us for several days in a row. We informed them that we were studying space law in order to become space lawyers. Then one of the locals repeated happily: "Ah, spice lawyers, that sounds very sweet." We explained again that we deal with space, and not with spices. However, he was not able to follow us. To him, we were simply "spice" lawyers for the rest of the



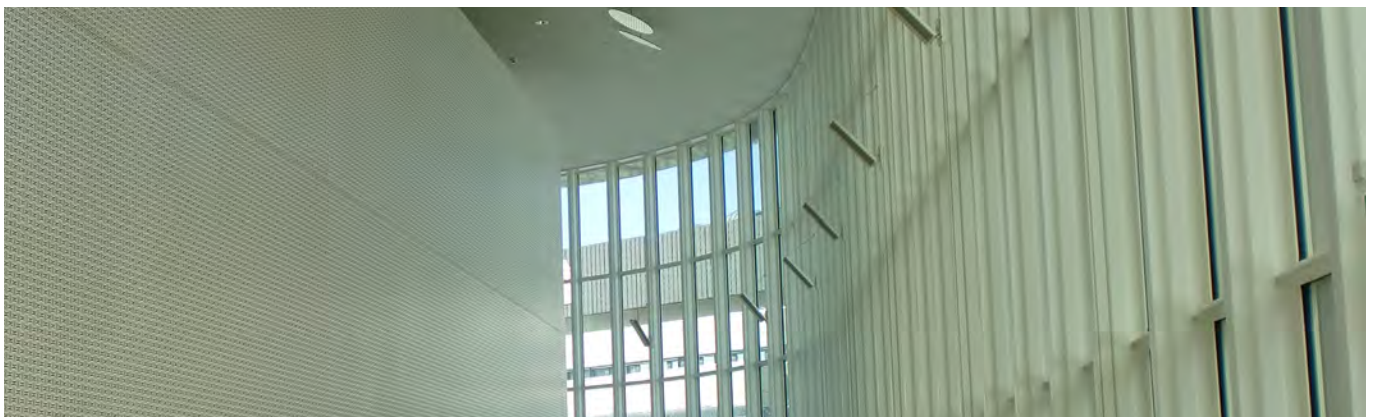
week. So from that day on, we called each other "spicy space lawyers" while having a good laugh about it.

To round off our heavy workload and to complement all the input we obtained, we visited the city observatory and were invited for dinner by the ECSL. Recapitulating all our experiences, we had a great time in Rijeka, made a lot of new friends, got deeper engaged in space affairs, and we are looking forward to meeting each other again at upcoming space related events.



AUSBLICK *prospect*

18 - 20 October 2012	Astrobiology Workshop, Aveiro School, Portugal
18 October 2012	ECSL General Assembly, Paris, France
30 October 2012	European Conference on On-Orbit Satellite Servicing and Active Debris Removal, Secure World Foundation, Brussels, Belgium
8 - 9 November 2012	2012 Beijing Space Sustainability Conference, Beihang University, Beijing, China
12 - 16 November 2012	United Nations/Chile Workshop on Space Technology Applications for Socio-Economic Benefits, Centro de Información de Recursos Naturales (CIREN) of Chile, Santiago, Chile
27 November 2012	Small is Beautiful? – Potentials and Risks of Small Satellite Projects, Top Floor, Juridicum, University of Vienna, Vienna, Austria
3 December 2012	United Nations International Expert Meeting on Crowdsourcing Mapping for Disaster Risk Management and Emergency Response, United Nations Office in Vienna (Vienna International Center), Austria
20 February 2013	Singapore Conference on On-Orbit Satellite Servicing and Active Debris Removal, Sheraton Towers, Singapore, Singapore
07 - 12 July 2013	19th IAA Human in Space Symposium, Cologne, Germany
18 - 20 September 2013	5th International Academy of Astronautics Symposium on Searching for Life Signatures, Beijing, China
23 - 27 September 2013	64th International Astronautical Congress, Beijing, China



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National Point of Contact Austria

NPOC Austria

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HERAUSGEBER: NPOC Space Law Austria; Prof. Dr. Irmgard Marboe, Schottenbastei 10-16/5/2, 1010 Wien, irmgard.marboe@spacelaw.at, www.spacelaw.at

KONZEPT, LAYOUT, KOORDINATION: Anna-Maria Kanduth **AUTOREN:** Ntorina Antoni, Nicole Ehlötzky, Michaela Hinterholzer, Boris Levtchev, Irmgard Marboe, Anita Rinner, Dimitra Stefoudi, Karin Traunmüller **FOTOS:** Nicole Ehlötzky, Irmgard Marboe, Andreas Soucek, Universität Graz, ESPI, Parlamentsdirektion Wien, ESA

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