UNITED NATIONS/CHINA/APSCO
WORKSHOP ON SPACE LAW

The Role of National Space Legislation in Strengthening the Rule of Law

jointly organized with and hosted by
China National Space Administration (CNSA)

17 to 20 November 2014
Beijing, China

MONDAY, 17 NOVEMBER 2014

Opening Ceremony

08:00-09:00 Registration

09:00-10:00 Opening Ceremony with Welcome Addresses

Moderator: **Mr. WU Yanhua, Vice Administrator of CNSA**

China National Space Administration (CNSA)

Mr. XU Dazhe, Administrator of CNSA

United Nations Office for Outer Space Affairs (OOSA)

Ms. Simonetta DI PIPPO, Director of OOSA

Asia-Pacific Space Cooperation Organization (APSCO)

Mr. Celal UNVER, Secretary-General of APSCO

Government of China

10:00-10:45 Photo session/coffee break

10:45-11:15 Keynote Speech: The concept of rule of law in outer space activities

Mr. Sergio MARCHISIO

11:15-11:45 Keynote Speech: Development international space law: Legal framework, objective and orientation

Mr. MA Xinmin

MONDAY, 17 NOVEMBER 2014 cont...

DEVELOPMENTS IN SPACE LAW AND POLICY

Session 1

Chair:	**Mr. Henry HERTZFELD**
11:45-12:00	Introduction by the Chair
12:00-12:30	Space law treaties and soft law development **Ms. Irmgard MARBOE**
12:30-13:45	Lunch
13:45-14:15	The development of space policy and its role **Mr. ZHAO Haifeng**
14:15-14:45	The role of transparency and confidence-building measures in promoting the rule of law in outer space activities **Mr. Ben BASELEY-WALKER**
14:45-15:15	Perspectives on space-traffic management **Mr. Bernhard SCHMIDT-TEDD**
15:15-15:30	Questions & answers
15:30-16:00	Coffee break

MONDAY, 17 NOVEMBER 2014 cont...

SPACE LAW AND COMMERCIAL SPACE ACTIVITIES

Session 2

Chair:	**Mr. GAO Ruofei**
16:00-16:15	Introduction by the Chair
16:15-16:45	Legal aspects of commercial space activities **Mr. Paul DEMPSEY**
16:45-17:15	Operation of small and very small satellites: The case of authorization, supervision and control, and registration **Mr. Steven FREELAND**
17:15-17:45	Legal issues related to satellite launch: China's perspectives **Ms. WANG Jilian**
17:45-18:00	Questions & answers

TUESDAY, 18 NOVEMBER 2014

PROMOTING NATIONAL SPACE LEGISLATION: EXPERIENCE AND PROSPECTS

Session 3

Co-Chairs: **Mr. SHANG Zhen & Mr. LI Shouping**

09:00-09:15	Introduction by the Co-Chairs
09:15-09:45	General Assembly resolution 68/74 on recommendations on national legislation relevant to the peaceful exploration and use of outer space **Ms. Irmgard MARBOE**
09:45-10:15	Responsibility and liability for national space activities **Mr. Armel KERREST**
10:15-10:45	Registration of space objects with the United Nations **Mr. Niklas HEDMAN**
10:45-11:00	Questions & answers
11:00-11:30	Coffee break
11:30-12:00	Australia **Mr. Steven FREELAND**
12:00-12:30	China **Mr. LI Guoping**
12:30-13:45	Lunch

TUESDAY, 18 NOVEMBER 2014 cont...

Session 3

13:45-14:15	States of the European Union and European Space Agency **Mr. Sergio MARCHISIO**
14:15-14:45	Japan **Ms. Setsuko AOKI**
14:45-15:15	Russian Federation **Mr. Vladimir AGAPOV**
15:15-15:45	United States of America **Mr. Henry HERTZFELD**
15:45-16:00	Questions & answers
16:00-16:30	Coffee break
16:30-17:45	EXCHANGE OF INFORMATION ON NATIONAL REGULATORY FRAMEWORKS Islamic Republic of Iran **Ms. Fariba RAZIPOUR** Pakistan **Mr. Abdullah Jamail KHAN** Republic of Korea **Mr. Joon LEE** Thailand **Mr. Chukeat NOICHIM**
17:45-18:00	Questions & answers
19:00-21:00	Welcome banquet hosted by APSCO & CNSA

WEDNESDAY, 19 NOVEMBER 2014

MECHANISMS FOR REGIONAL AND INTERNATIONAL COOPERATION

Session 4

Chair:	**Mr. Paul DEMPSEY**
09:00-09:15	Introduction by the Chair
09:15-09:45	International cooperation mechanisms on space activities: Perspectives on the Working Group of the Legal Subcommittee of COPUOS **Ms. Setsuko AOKI**
09:45-10:15	The role of APSCO and its legal structure **Mr. Murat Yasar BAYRAK**
10:15-10:45	The role of bilateral and multilateral agreements in international space cooperation **Mr. ZHAO Yun**
10:45-11:15	Coffee break
11:15-11:45	The example of the European Space Agency (ESA) **Ms. Tanja MASSON-ZWAAN**
11:45-12:15	The International Committee on Global Navigation Satellite Systems (ICG) and the International Space Exploration Forum (ISEF) as mechanisms for cooperation **Mr. Kenneth HODGKINS**
12:15-12:30	Questions & answers
12:30-13:45	Lunch

WEDNESDAY, 19 NOVEMBER 2014 cont...

CAPACITY-BUILDING IN SPACE LAW AND EDUCATION

Session 5

Chair: **Ms. Tanja MASSON-ZWAAN**

13:45-14:00	Introduction by the Chair
14:00-14:30	The role of capacity-building in space law development at national level - from the perspective of China **Mr. ZHANG Zhenjun**
14:30-15:00	The United Nations Curriculum on Space Law **Mr. Niklas HEDMAN**
15:00-15:30	Space law teaching at Regional Centres for Space Science and Technology Education, affiliated to the United Nations: the case of the Beihang Regional Centre **Mr. GAO Guozhu**
15:30-15:45	Questions & answers
15:45-16:15	Coffee break
16:15-18.00	ROUND TABLE DISCUSSION ON SPACE LAW TEACHING
Round table 1 (16:15-17:00)	**Moderator: Ms. Tanja MASSON-ZWAAN** Mr. Sergio MARCHISIO Ms. Joanne GABRYNOWICZ Mr. Henry HERTZFELD Ms. Maureen WILLIAMS Mr. ZHAO Yun Mr. Doo Hwan KIM
Round table 2 (17:00-17:45)	**Moderator: Mr. LI Juqian** Ms. Irmgard MARBOE Mr. Paul DEMPSEY Ms. Setsuko AOKI Mr. Steven FREELAND Mr. Armel KERREST Mr. LI Shouping

THURSDAY, 20 NOVEMBER 2014

REGULATORY AND INSTITUTIONAL ASPECTS ON THE USE OF SPACE-DERIVED DATA AND INFORMATION

Session 6

Chair: **Mr. Shirish RAVAN**

09:00-09:15	Introduction by the Chair
09:15-09:45	The use of space-based information for development and disaster management: Policies and practices **Mr. Shirish RAVAN & Mr. Rokhis KHOMARUDIN**
09:45-10:15	International regulatory perspective on Earth Observation data and China's practice **Mr. WANG Guoyu**
10:15-10:45	Coffee break
10:45-11:15	Regulatory aspects on Earth Observation: A brief survey of remote sensing law and policy around the world **Ms. Joanne GABRYNOWICZ**
11:15-11:45	Regulatory aspects on GNSS **Mr. Armel KERREST**
11:45-12:15	The use of satellite data in international litigation: New developments and applications **Ms. Maureen WILLIAMS**
12:15-12:30	Questions & answers
12:30-13:45	Lunch

THURSDAY, 20 NOVEMBER 2014 cont...

RECOMMENDATIONS, OBSERVATIONS AND CONCLUSIONS

Session 7

Co-Chairs: **Mr. Niklas HEDMAN and Mr. LI Jiangang**

13:45-15:00	Recommendations, Observations and Conclusions
15:00-15:30	Closing of the Workshop
16:00-20:00	Excursion (Visit to National Satellite Meteorological Center (NSMC))

Biographies
and
Abstracts

Setsuko AOKI

Biography

Career:

Present position: Professor of International Law, Faculty of Policy Management, Keio University, Japan (since April 2004); also a Professor, Graduate School of Law (since April 2012) previous careers include Associate Professor, School of Social Science, National Defense Academy of Japan (1994-1999) and Associate Professor, Faculty of Policy Management, Keio University, Japan (1999-2004).

Education and Degree:

Doctor of Civil Law (D.C.L.), Institute of Air and Space Law, Faculty of Law, McGill University, Canada (June, 1993); LL.M., Graduate School of Law, Keio University, Japan (March, 1985); B.C.L., Faculty of Law, Keio University, Japan (March, 1983)

Main present positions in the Japanese Government:

Member of Space Policy Committee (Cabinet Office) since July 2012; a member of Telecommunications Council of the Ministry of Internal Affairs and Communications (MIC) since January 2007; legal advisor of the Ministry of Foreign Affairs to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS) since March 2002.

Academic Society:

International Institute of Space Law (IISL) (board member), International Law Association (ILA) (member of Space Law Committee from Japan), The Japanese Association of World Law (board member), The Air Law Institute of Japan (board member), The Japan Association of International Security and Trade (Vice President); the Japanese Society of International Law (member of Research Planning Committee).

Main Articles since 2012

"Analysis of the Legal Instruments Operating the ISS as the Most Complex Space Program Ever Undertaken: from historical perspective", IAC-14.E.7.3.2; "Efficient and Equitable Use of Orbit by Satellite Systems: "Paper Satellite" Issues Revisited", *Proceedings of the International Institute of Space Law 2013* (2014), pp. 229-246; "Satellite Ownership Transfers and the Liability of the Launching States" (in Japanese), *Journal of Air Law*, vol.54 (2013), pp.1-26; "The Standard of Due Diligence in Operating a Space Object", *Proceedings of the International Institute of Space Law 2012* (2013); "The Function of Soft Law in the Development of International Space Law", in Irmgard Marboe ed., *Soft Law in Outer Space*, Böhlau (2012), pp.57-85; "Japanese Space Activities Act in the Making," Zeitshcrift für Luft-und Weltraumrecht, vol.61, no.1 (2012), pp.111-128; "Attribution Tests in the Use of Force and/or Armed Attack in the Cyberspace" (in Japanese), *International Situations*, no.82 (2012), pp.338-349.

Setsuko AOKI

Abstract

Session 3

Promoting National Space Legislation: Experience and Prospects Japan

National Space Laws of Japan: Today and Tomorrow

Japan does not have a comprehensive space activities act while it is requested in the Basic Space Law and the Diet resolutions both adopted in 2008 due, in part, to the political turbulences which Japan experienced for the last several years. It is only recent months that has been again seriously taken into consideration in the government. Under the circumstances, this presentation consists of two parts: firstly, the present Japanese national laws will be explained which address authorization for the launch and the peration of satellites in outer space, third party liability, insurance, etc. in accordance with the GA Resolution 68/74 (2013). Secondly, the contents of the prospective space activities act will be introduced that is likely to be made into law in the near future.

Mechanisms for Regional and International Cooperation

International Cooperation Mechanisms on Space Activities: Perspectives on the Working Group on the Legal Subcommittee of COPUOS

Abstract

Session 4

This presentation introduces the purpose, methodology and the development of the first two years of the COPUOS/LSC agenda item titled “review of international mechanisms for cooperation in the peaceful exploration and use of outer space.” Information provided by States and international governmental and non-governmental organizations is also briefly explained. Finally, a set of questions adopted in the 2014 Working Group under this agenda item will be studied as a reference for the future work and a final product due in 2017.

Ben BASELEY WALKER

Biography

Ben Baseley-Walker is the Programme Lead of the Emerging Security Threats Programme (EST) at the United Nations Institute for Disarmament Research (UNIDIR). Having established the programme in 2011, Mr Baseley-Walker directs the work of the group, which encompasses outer space, cyberspace, environmental conflict, nanotechnology and the role of emerging technologies in conflict mitigation and prevention. Before joining UNIDIR, Mr Baseley-Walker was the Advisor on Security Policy and International Law for the Secure World Foundation (SWF). He previously worked in international relations and international law in East Africa with the Kenya National Commission on Human Rights, the Ethiopia International Law Project and the United Nations High Commissioner for Refugees in Nairobi, Kenya. Mr Baseley-Walker studied International and European Law at the Universiteit Van Amsterdam Law School in the Netherlands, and Politics at the University of Edinburgh in Scotland. He is also a graduate of the International Space University Space Studies Programme in Beijing.

Abstract Session 1

The role of transparency and confidence-building measures in promoting the rule of law in outer space activities

In light of the 2013 conclusion of the Group of Governmental Experts on Transparency and Confidence Building Measures for Outer Space Activities, the work of Conference on Disarmament on the Prevention of an Arms Race in Outer Space and various United Nations (UN) General Assembly resolutions on the prevention of space conflict, it is evident that the international peace and security implications of space activities are of growing importance to the international community. In pursuit of a stable and sustainable space security regime, the promotion of TCBMs in space has a proven track record of supporting meaningful dialogue between space-faring nations, especially emerging actors. The work of regional organisations such as the ARF is of particular importance. The development of such activities will allow for more effective participation of all space stakeholders in multilateral processes and a foundational level for future legal and policy development in the space domain.

Murat Yasar BAYRAK

Biography

Murat Yasar Bayrak is the Director General of External Relations and Legal Affairs of Asia Pacific Space Cooperation Organizations (APSCO). He had his Bachelor and Master's degree in Industrial Engineering in 2001 and 2004 respectively in Sakarya University, Turkey. He also started working as a research assistant in Department of Informatics in Sakarya University in 2002. In 2006 Mr.Bayrak changed his career from being an academician to a professional and began working in IT sector. After years of experience in IT at different fields such as consultancy, project management and international business development he started working for the Scientific and Technological Research Council of Turkey (TUBITAK) in the Informatics and Information Security Research Center (BILGEM) as President Advisor in 2012. In the year 2014 Murat Yasar Bayrak was selected as Director General of External Relations and Legal Affairs of Asia Pacific Space Cooperation Organization.

Abstract

Session 4

The role of APSCO and its legal structure

APSCO is an intergovernmental organization that is working for the peaceful uses of outer space by developing collaborative multilateral space programs among its member states in Asia Pacific Region and conducting education and training activities to build capacity for space technologies. APSCO was established in 2005 with the signing of APSCO convention by 8 countries; Bangladesh, China, Indonesia, Iran, Mongolia, Pakistan, Peru and Thailand. Later, Turkey signed the APSCO convention and joined APSCO in 2006. The legal structure of multilateral organizations plays an important role in the success of the organization. With its 14 different collaborative projects and tens of different education and training activities within a short time of 5 years, APSCO represents a good example of regional space collaboration. In this presentation, the role, objective and the legal structure of APSCO will be focused with the references to its convention and other legal documents of APSCO. Especially the decision making process, working method and funding of APSCO in collaborative activities will be discussed. Also the organizational structure of APSCO secretariat will be shared with the details of responsibilities of each department.

Paul Stephen DEMPSEY

Biography

Paul Stephen Dempsey is Tomlinson Professor of Global Governance in Air & Space Law and Director of the Institute of Air & Space Law at McGill University, in Montreal, Canada. For more than two decades, he held the chair as Professor of Transportation Law, and was Director of the Transportation Law Program at the University of Denver. He was also Director of the National Center for Intermodal Transportation, a consortium of the University of Denver and Mississippi State University). Earlier, he served as an attorney with the Civil Aeronautics Board and the Interstate Commerce Commission in Washington, D.C., and was Legal Advisor to the Chairman of the I.C.C.

Dr. Dempsey holds the following degrees: Bachelor of Arts, Juris Doctor, University of Georgia; Master of Laws, George Washington University; Doctor of Civil Laws, McGill University. He is admitted to practice law in Colorado, Georgia and the District of Columbia.

Professor Dempsey was a Fulbright Scholar, was awarded the Transportation Lawyers Association Distinguished Service Award, and was designated the University of Denver's Outstanding Scholar. He was the first individual designated the University of Denver's Hughes Research Professor, and DePaul University's Distinguished Visiting Professor of Law. The Colorado transportation community named him “Educator of the Year”, and inducted him into the Colorado Aerospace Hall of Fame. For 23 years, he was faculty editor of the Transportation Law Journal. He also served on the Editorial Boards of the Denver Business Journal, and The Aviation Quarterly (Lloyds, London), and currently serves on the Editorial Board of the German Journal of Air & Space Law, and is currently Editor-in-Chief of the Annals of Air & Space Law. He is President of the International Air & Space Law Academy, and co-Chair of the Aviation Section of the Transportation Lawyers Association. Professor Dempsey has published more than 20 books and ninety law review and academic journal articles, and scores of newspaper and news magazine editorials.

From 1986 to 1998, he was host of KWGN-TV's weekly talk show, "Your Right to Say It." Professor Dempsey has appeared on the ABC Evening News with Peter Jennings, the MacNeil-Lehrer News Hour, ABC World Business Report, NBC Today, ABC Good Morning America, CNN Crossfire, National Public Radio, CBS Radio, NBC Mutual Radio, and other news broadcasting networks in the United States and abroad. His editorials have been published in major newspapers and news magazines, including for example, Newsweek, the New York Times, and the Wall Street Journal.

From 1994-2009, Paul Dempsey was Vice Chairman & Director of Frontier Airlines Holdings, Inc., and Chairman of Lynx Aviation, Inc.. He was a founder and first Chairman of the Board of Governors of the Certified Claims Professional Accreditation Council, Inc., and President and Director of the Genesee Foundation, Inc. He has also served as a consultant to U.S. and foreign airlines, railroads, motor carriers, bus companies, transportation labor organizations, industry associations, government agencies, and telecommunications companies.

Dr. Dempsey has delivered expert witness testimony and studies before the Public Utility Commissions of the states of California, Colorado, Kansas, Iowa, Ohio, Pennsylvania, and Washington, the Province of British Columbia, the courts of Missouri and Nevada, United States District Courts and Circuit Courts of Appeal, the Cour de Cassation (France), and the Australian Competition Commission. He has testified before the transportation committees of the U.S. Senate, the U.S. House of Representatives, the Canadian Senate, and the state legislatures of Colorado, Michigan and Texas. He has lectured in Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, the Czech Republic, Denmark, the Dominican Republic, France, Germany, Greece, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Jordan, Kenya, Kuwait, Macau, Mexico, the Netherlands, New Zealand, Nigeria, Papua New Guinea, Poland, Portugal, Romania, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Turkey, the United Arab Emirates, the United Kingdom, and the United States.

Paul Stephen DEMPSEY

Abstract

Session 2

Legal Aspects of Commercial Space Activity

A growing number of States are becoming space-faring nations. In order to fulfill their international obligations, to protect their citizens from harm, to protect their treasuries from liability, while encouraging and fostering the development of commercial space activities, many States are enacting national space legislation, establishing governmental space regulatory institutions and giving them jurisdiction to license private actors and ensure compliance with regulatory requirements. Legislation is important to provide stability and predictability of the legal regime.

Licensing is also important as a governmental seal of approval to facilitate investment and financing of the space enterprise, and to to assuage their customer's concerns about the safety of aerospace vehicles. Further, with the absence of an international regulatory regime addressing safety and navigation of aerospace vehicles, a growing number of space-faring States see the need to fill that regulatory void with domestic legislation. Though a number of commentators have urged the International Civil Aviation Organization [ICAO] to regulate the safety and navigation of aerospace vehicles, to date, it has not yet exerted jurisdiction. Moreover, the world community has failed to draft a single multilateral treaty addressing space issues since 1979. That abstinence too inspires the promulgation of domestic space legislation.

Cognizant of their international legal obligations and liability exposure, and mindful of the need to protect life, property and the environment, at least 26 States have promulgated national space legislation and imposed regulatory requirements upon commercial space activities. in order to enhance safety, protect their citizens and property, preserve national wealth and avoid environmental harm, many national space laws focus on common issues through the vehicle of licensing – the technical and financial qualifications of applicants, liability and indemnification, environmental issues, operational restrictions, sanctions and enforcement. This paper will offer a comparative analysis of national space legislation, regulation and enforcement.

Simonetta DI PIPPO

Biography

Simonetta Di Pippo is the Director of the United Nations Office for Outer Space Affairs. Her experience includes serving as Director of the Observation of the Universe at ASI (2002 - 2008) and ESA Director of Human Spaceflight (2008 - 2011). Prior to her appointment at UNOOSA in March 2014, she was Head of the European Space Policy Observatory at ASI Brussels.

She holds a Master's Degree in Astrophysics and Space Physics, and an Honoris Causa degree in Environmental Studies. Ms. Di Pippo was knighted by the President of the Italian Republic in 2006. In 2008, IAU named asteroid 21887 "Dipippo".

Steven FREELAND

Biography

Steven Freeland is Professor of International Law at the University of Western Sydney, a Visiting Professor at the University of Vienna, a Visiting Professor of the iCourts Centre of Excellence for International Courts, Denmark, and a Member of Faculty of the London Institute of Space Policy and Law. In addition, he has been a Visiting Professional within the Appeals Chamber at the International Criminal Court, The Hague, and a Special Advisor to the Danish Foreign Ministry in matters related to the International Criminal Court. He has taught courses at over 25 Universities around the world. Among other appointments, he is a member of the Advisory Board of the US-based Global Institute for the Prevention of Aggression, a member of the Space Law Committee of the London-based International Law Association, and a Director and member of the Directorate of Studies of the Paris-based International Institute of Space Law. He sits on the Editorial Board of a number of international journals, including the Australian Journal of Human Rights, the Australian International Law Journal, the Canada-based Annals of Air and Space Law, the German-based German Journal of Air and Space Law / Zeitschrift fur Luft- und Weltraumrecht and the China-based Space Law Review, and on the Advisory Board of the India-based Asian Journal of Air and Space Law and the UK-based Journal of Philosophy of International Law, as well as a series of books entitled Studies in Space Law. He is also Co-Editor of Annotated Leading Cases of the International Criminal Tribunals, a long-established series of casebooks annotating the jurisprudence of the International Criminal Court, the International Criminal Tribunals for the former Yugoslavia and for Rwanda, the Special Court for Sierra Leone, the Extraordinary Chambers in the Courts of Cambodia, the Special Tribunal for Lebanon and the Special Panels for Serious Crimes in East Timor. He has authored approximately 300 publications on various aspects of International Law and has been invited to present over 700 expert commentaries by national and international media outlets worldwide on a wide range of legal and geopolitical issues. He is also a frequent speaker at national and international conferences.

Steven FREELAND

Abstract

Session 2

Operation of small and very small satellites: The case of authorization, supervision and control, and registration

The development of space-related technology since the dawn of the space age in 1957 has given rise to many new and exciting possibilities. It has also meant that a vast array of space activities are now possible, involving the participation of a variety of space 'actors' other than States. One of the potentially most significant developments in this regard has been the increasing use of small satellites. These are far cheaper and less complex to develop and build and launch than traditional satellites, and have thus enabled groups such as university students and non-profit organisations to also become involved in space. Yet, despite the tremendous opportunities that small satellites may offer, it is equally important to recognize that, like other space objects, they are subject to the regulatory requirements specified in the international space treaties, as well as other instruments and national legislation. Moreover, the use of small satellites also raises additional legal challenges that must be addressed. This paper discusses a number of the more significant regulatory requirements and analyses how they are to apply to space activities involving small satellites.

Australia – National Space Law and Space Policy

Abstract

Session 3

Australia has had a long heritage in outer space activities and was significantly involved in several important contributions, particularly to the early development of humankind's endeavours in space. It has also been a strong supporter of the establishment of political and diplomatic institutions involved in developing the fundamental legal framework for the exploration and use of outer space. Australia's early promise as a major space faring nation has, however, not thus far evolved to the extent once thought possible, due largely to the lack of direction and support on the part of successive Governments from the 1970s. More recently, however, a number of significant regulatory initiatives have been developed, notably a dedicated national space legislation (1998) and, more recently (2013), a revised Government space policy. This paper will describe the salient features of both the legislation and policy documents and then offer some brief comments as to the prospects for Australia's future role with respect to the peaceful exploration and use of outer space.

Joanne Irene GABRYNOWICZ

Biography

Prof. Gabrynowicz has taught space law for 27 years. She is Professor Emerita of space law at the University of Mississippi School of Law and Editor-in-Chief Emerita, Journal of Space Law. She is currently Visiting Professor at the Beijing Institute of Technology School of Law where she is teaching international space law. Prof. Gabrynowicz advises the U.S. government and the U.N. on space law. She recently was invited by the Subcommittee on Space of the U.S. House Committee on Science, Space, and Technology to testify regarding the legality of asteroid mining. Prof. Gabrynowicz currently serves on three U.S. Federal advisory committees: the Department of Commerce Advisory Committee on Commercial Remote Sensing; the NASA Planetary Protection Subcommittee, and the Department of Interior National Geospatial Advisory Committee. She briefed former U.S. Secretary of the Interior Gayle Norton as part of the Secretary's preparation for the Earth Observation Summit. She also briefed Frank A. Rose, Deputy Assistant Secretary for Space and Defense Policy, U.S. Department of State on legal aspects of orbital debris.

She is a guest lecturer at universities around the world and the author of numerous articles, papers and book chapters. Prof. Gabrynowicz is the recipient of a number of awards in the field, including Women In Aerospace's *Outstanding International Award*. Prior to her academic career, Prof. Gabrynowicz was the managing attorney of a New York City law firm. She is a member of the American Bar Association Forum on Aviation and Space Law and a Director of the International Institute of Space Law.

www.joannegabrynowicz.com

Abstract Session 6

Regulatory Aspects on Earth Observation:

A Brief Survey of Remote Sensing Law and Policy Around the World

This presentation surveys the laws and policies of remote sensing nations around the world. It includes a brief review of the institutional, administrative, legal, and policy matters from the 1970s to the present. Nations and cooperating nations considered are Brazil and China, Canada, Europe, France, Germany, India, Japan, the Russian Federation (CIS), the United Kingdom, and the United States.

GAO Guozhu

Biography

Guozhu Gao, Associated Professor of Law, Beihang University Law School, Co-Director of Institute of Space Law of Beihang University. The main research field is space law.

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Abstract

Session 5

The Regional Centres for Space Science and Technology Education (affiliated to the United Nations) have played an important role in the field of space science and technology education. The Scientific and Technical Subcommittee of the Committee on Peaceful Uses of Outer Space , in its fiftieth session, held in 2013 welcomed a proposal by the Government of China to establish a regional Centre for space science and technology education, affiliated to the United Nations hosted by Beihang University in Beijing, under the United Nations Programme on Space Applications. The report of the evaluation mission facilitated by the United Nations Office for Outer Space Affairs to the regional Centre to be established in Beihang University in China pointed out that "the Centre would be an important contribution to efforts in capacity building in space science and technology education and would complement the efforts on-going in the existing Regional Centres for Space Science and Technology Education, affiliated to the United Nations". Ms. Simonetta Di Pippo, Director of the UN Office for Outer Space Affairs (UNOOSA), was invited to sit in on the inaugural meeting of the Governing Board of the Centre, held at Beihang University on Oct, 17th, 2014 and preside over the listing ceremony of the new Centre. Thus, the Asia-Pacific Regional Centre for Space Science and Technology Education (China) (Affiliated to United Nations) has become the sixth regional centre for Space Science and Technology Education in the world. In accordance with practice, the Centre will establish the Governing Board and the Advisory Committee. The Governing Board shall be the principal policy-making organ of the Centre. The Advisory Committee shall provide advice on central tasks to the Governing Board. Under the leadership of the Governing Board, the director is responsible for the Centre. The Centre will create four departments, i.e. admission and students' affairs, education and training affairs, operational management and logistical support affairs, cooperation and legal affairs. The Centre will offer diverse educational and training programs of the related majors, including remote sensing and geographic information systems (RS&GIS), satellite communication, global navigation satellite system, space law, basic space science and technology (micro-satellite technology), Satellite Meteorology and Atmospheric Sciences., which will be an important complement to the other existing Centres.

GAO Ruofei

Biography

Mr. GAO Ruofei started his space carrier in early 1989 when he joined the China Great Wall Industry Corporation (CGWIC). He graduated and obtained the Master of Space Studies (MSS) degree from the International Space University in July 1999. He participates in business development, marketing, contract negotiations and performance for the Long March commercial launch services programs and China built telecommunications and remote sensing spacecraft system sales. He is executive vice president for space business of CGWIC.

Niklas HEDMAN

Biography

Niklas Hedman is Chief of Committee, Policy and Legal Affairs Section of the United Nations Office for Outer Space Affairs (OOSA). He is Secretary of the Committee on the Peaceful Uses of Outer Space (COPUOS) and its Scientific and Technical Subcommittee and Legal Subcommittee. He is also Secretary of the United Nations Inter-Agency Meeting on Outer Space Activities, which is the central coordination mechanism for space related activities in the United Nations system. He is responsible for OOSA capacity-building activities in space law and policy. Before joining the United Nations in 2006, he worked in the Swedish Ministry for Foreign Affairs, particularly in the areas of ocean affairs and law of the sea; space law and space policy; as well as disarmament and non-proliferation, including PAROS and the Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC). He represented Sweden to COPUOS for 10 years and held various positions, including Chair of the UNISPACE III+5 report A/59/174. Mr. Hedman represented Sweden to the final rounds of negotiations on the International Space Station Intergovernmental Agreement (ISS-IGA), and was chief negotiator to the governmental framework agreement on space cooperation between Sweden and the United States of America. He is a member of the International Space Law Committee of the International Law Association (ILA), International Institute of Space Law (IISL) and International Academy of Astronautics (IAA).

Niklas HEDMAN

Abstract

Session 3

Registration of space objects with the United Nations

The presentation will cover the objective and function of the Register set up under the registration Convention. There will also be information provided on the function of a register used for the purpose of registration submissions under General Assembly resolution 1721 B of 1961, which provides the means for States not parties to the Registration Convention to register space objects launched into outer space. The, the complementary nature of those two registers maintained by the United Nations Office for Outer Space Affairs (UNOOSA) will be covered. In 2007 the General Assembly adopted resolution 62/101 entitled "Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects". This resolution, which was a result of multi-year work of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, will be assessed in view of the function of the registers maintained by the UN. Through that resolution, the following main issues are covered: Adherence by States to the registration Convention; harmonization of practice; achieving the most complete registration; and change in supervision of a space object in orbit. As a result of the resolution, UNOOSA established a registration submission form that is being increasingly used by launching States. The presentation will look into these aspects in comparison with General Assembly resolution 68/74 of 2013 entitled "Recommendations on national legislation relevant to the peaceful exploration and use of outer space".

Abstract

Session 5

The United Nations curriculum on space law

The presentation will provide an overview of the United Nations Curriculum on Space Law. In 2007 the Legal Subcommittee requested UNOOSA to explore the possibility of developing a curriculum for a basic course on space law that could be used, in particular for the benefit of developing countries, in the activities of the Regional Centres on Space Science and Technology Education affiliated to the United Nations. Over the years the Office developed the curriculum closely together with a group of experts and educators in the field of space law. In 2013 the Curriculum was officially published on the website of UNOOSA together with a supplemental materials, including lists of monographs, articles and other material, in all official languages of the United nations. This supplemental resource will be continuously updated. Also included are links to useful websites for the study of space law. The Curriculum itself is structured in a series of Modules, each with module objective; learning outcomes; and module design. Although the Curriculum is developed to support the activities of the regional Centres, it has been structured in such a manner that it can serve as an educational tool for other institutions and training activities. The Curriculum is designed to be an efficient and flexible tool for global capacity-building on the beneficial uses of outer space and the legal regime applicable thereto.

Henry R. HERTZFELD

Biography

Dr. Henry R. Hertzfeld is a Research Professor of Space Policy and International Affairs at the Space Policy Institute, Center for International Science and Technology Policy, Elliott School of International Affairs, George Washington University. He is also an Adjunct Professor of Law at GW. He is an expert in the economic, legal, and policy issues of space and advanced technological development. Dr. Hertzfeld has served as a Senior Economist and Policy Analyst at both NASA and the National Science Foundation, and is a consultant to both U.S. and international agencies and organizations. He is author of many articles on the economic and legal issues concerning space and technology. Dr. Hertzfeld is a member of the Bar in Pennsylvania and the District of Columbia. He can be contacted at: hrh@gwu.edu or hhertzfeld@law.gwu.edu .

Abstract

Session 3

United States National Space Legislation

The United States is a State Party to all of the United Nations Space Treaties except the Moon Agreement. The time-honored principles and obligations of those treaties are clearly recognized in U.S. laws and policies. The United States of American has the most complex and sophisticated set of laws and regulations in the World governing all aspects of its space activities. The United States Government human and robotic space missions are regulated by detailed internal guidelines that range from safety and financial responsibility to the sustainability of the space environment. In addition, private sector space activities are encouraged through government policies and these non-governmental space activities are regulated by agencies responsible for different types of activities in space. The U.S. Congress, through specific legislation, grants regulatory authorities to the various agencies and the agencies then issue specific regulations implementing their legislative mandates. The process for developing regulations is open to public comment before the regulations become final and decisions of the agencies are appealable through the judicial system of the United States. The United States is responding to new private sector initiatives by actively working to develop new legislation and regulations that will be needed to respond to these new initiatives as they mature into successful ventures. These legislative and regulatory responses are being formulated in a manner consistent with the principles of international and domestic law.

Kenneth HODGKINS

The International Committee on Global Navigation Satellite Systems (ICG) and the International Space Exploration Forum (ISEF) as mechanisms for cooperation

Abstract

Session 4

"The Space Millennium: Vienna Declaration on Space and Human Development" states that "international cooperation should be conducted in the modes that are considered most effective and appropriate by the countries concerned, including, inter alia, governmental and non-governmental; commercial and non-commercial; global, multilateral, regional or bilateral; and international cooperation among countries in all levels of development."

Since the first meeting of the Committee on the Peaceful Uses of Outer Space 50 years ago, Nation States and international organizations have acted collectively to promote the peaceful exploration and use of outer space through a variety of mechanisms. These include the UN outer space treaties, associated non-binding principles and guidelines, bilateral and multilateral arrangements, regional conferences, and international coordination groups.

Included among the coordination groups are the International Committee on Global Navigation Satellite Systems (ICG) and the International Space Exploration Forum (ISEF). The ICG, established in 2005, brings Global Navigation Satellite System (GNSS) providers and representatives of users together to promote compatibility and interoperability among global and regional systems, to the benefit of users, and the integration of GNSS technology and applications into infrastructures, particularly in developing countries. ISEF, hosted by the United States in January 2014, provides a unique forum for nations to discuss policy issues relevant to the cooperative exploration, utilization, and long-term sustainability of outer space, and highlight the benefits to humankind of national investment in space exploration. Japan will host the next ISEF in 2016 or 2017 to continue this important dialogue.

This presentation will discuss the ICG and ISEF as beneficial mechanisms for cooperation, and identify why each venue has been successful or will be successful in achieving the specific objectives it has been created to accomplish.

Armel KERREST

Biography

Professor of public law, Institute of Law of International Spaces; UMR AMURE; Faculty of Law, University of Brittany (France), Vice chairman of the European Centre for Space Law (European Space Agency) (ECSL/ESA)

Armel Kerrest studied in Saarbrucken and Paris; he is a "Docteur d'État" from the University of Paris I - Pantheon-Sorbonne, (1985 thesis award of the Universities of Paris,).

Professor of Public Law in the French Universities, he teaches Public Law, especially International Space Law and Law of the Sea at the Universities of Western Brittany and Paris XI. He taught in other French and foreign universities on many occasions, published books and articles on European, and International Law especially Space Law and Law of the Sea. He conducts his research activities within the "Unité mixte de recherche" (UMR) Ifremer/University of Western Brittany, AMURE, Brest, France.

He advised and advises for Space Law the French Space Agency (CNES), the French Ministry of Foreign Affairs (Legal Department), the French Senate Commission for Economy, the European Union, the United Nations Office for Outer Space, Eutelsat International Organisation and other Governments and International Organisations. Since 1997, he is a member and legal adviser of the French delegation to the UN COPUOS legal subcommittee. He has been the alternate head of this delegation. He was a member of the Working Group of the French "Conseil d'Etat" advising the Prime Minister of France on the elaboration of the space legislation adopted by the French Parliament in 2008.

He takes part in many Institutions acting in the field of Space Law. He is the Vice chairman of the European Center for Space Law of the European Space Agency (ECSL/ESA), the President of the Association for the Development of Space Law in France, the Chairman of the Institute of Law of International Spaces and Telecommunications; a Member of the Space Law Committee of the International Law Association. (ILA); a Member of the board of the European Centre for Space Law (ECSL) and of the Société francaise de droit aérien et spatial (SFDAS); a member of the International Institute of Space Law (IISL) and of the scientific board of the Institut de Droit de l'Espace et des Télécommunications (University of Paris-South). He is a member of the editorial board of the Zeitschrift für Lulf und Weltraumrecht (ZLW, Cologne, Germany) and of the Chinese review of Space Law

He is a member of the International Academy of Astronautics and a corresponding member of the Académie de l'Air et de l'Espace.

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Armel KERREST

Abstract

Session 3

Responsibility and liability for national space activities

When a State makes a law regulating space activities it has to take into consideration it's obligations with regard to international law especially to the Outer Space Treaty.

The first of these obligations is article Vi of the Treaty, which establishes the responsibility of States for national activities in Outer Space. If "non governmental entities" are involved they must authorise and supervise this activity.

According to article VII of the Outer Space Treaty and to the Liability Convention, any State that serves as a Launching State may be subject to liability. It is therefore preferable for them to take control over activities which could result in a liability.

Abstract

Session 5

Regulatory aspects on GNSS

Global Navigation Satellite System GNSS also entered our daily life. The US GPS and Russian Glonass were established by military for their use. They have opened to civilian utilisations and are now used on a day to day basis. The European Galileo system is being built and will be for civilian purposes.

The various uses of navigation, timing and positioning need a permanent operability which is a political issue . A more legal issue is liability in case of accident caused by the satellite or malfunctioning of the signal causing damage to users.

How could the liability convention apply to such cases?

Would it be necessary to draft a new convention in order to precise this liabilities ?

Abdullah Jamil KHAN

Abstract

Session 3

National Regulatory Framework for Outer Space Activities in Pakistan

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Pakistan Space & Upper Atmosphere Research Commission (SUPARCO)

Pakistan is a State party to all the five international treaties on outer space. Beginning its space programme in 1961 for scientific research, socio-economic development and national security needs, Pakistan has pursued peaceful exploration and use of outer space in conformity with international law as postulated in the relevant space treaties and UN regulatory instruments. Pakistan encourages participation in all international efforts directed towards enhancing long-term sustainability and security of outer space environment. Pakistan opposes the militarisation and weaponisation of outer space in all forms and manifestations. The national regulatory framework governing the conduct of outer space activities in Pakistan, as it stands, consists of three tiers, namely: (a) law establishing the national space agency of Pakistan and its functions; (b) ratification of and accession to international space treaties, adherence to principles and guidelines formulated under UN system, and cooperation with international and regional intergovernmental organisations; and (c) ongoing initiatives and efforts to enact national legislation and rules and regulations. Notable among these initiatives thus far include the formulation of Draft National Space Policy, need assessment for comprehensive national space legislation, and consultations with national stakeholders and international experts to incorporate space segment in the national telecommunications policy, all of which is expected to pave the way for the establishment of an independent national space regulatory authority and lay the foundation for enacting implementing space legislation in accordance with the international legal obligations of Pakistan. The objective of this paper is to explain each of the aforementioned three tiers with the aim of providing an overall view of the national regulatory framework along with discussing their inter-linkages.

Keywords: State party, space treaties, outer space environment, national regulatory framework, national space agency, Draft National Space Policy, national space legislation, national space regulatory authority, implementing space legislation.

LI Guoping

Biography

Mr. LI Guoping, Deputy Director General of the Department of System Engineering, China National Space Administration.

As Deputy Director General of the Department of System Engineering, Mr. LI Guoping takes charge of drafting and compiling five-year plan for China's space development as well as national space policies. He is the lead author of China's Space Activities (White Paper of 2006) and China's Space Activities (White Paper of 2011). Besides, Mr. Li's major responsibilities now also include promoting international cooperation and drafting national space law. He holds Doctor's Degree in Remote Sensing Technology from Peking University.

LI Jiangang

Biography

Dr. LI Jiangang, Legal Counsel with China National Space Administration (CNSA), Senior Lawyer in Space Law Center and Legal Counsel for China Great Wall Industry Corporation (CGWIC), specializes in international law, space law, intellectual property, corporate, foreign direct investment, and international transactions. Jiangang has nearly 20 years' experience as lawyer, in-house counsel and research fellow with law firms, international corporations, Chinese state-owned enterprises and academic institutions. Jiangang has advised a large number of governmental organizations, Chinese or international entities in a wide range of industry sectors including the space area. Jiangang obtained his Ph.D. degree in law from the Chinese Academy of Social Sciences. As a recognized scholar and author, he has authored books and numerous articles in his specialized areas.

LI Juqian

Biography

Ph.D, professor of China University of Political Science and Law (CUPL), Associate Dean of School of International Law of CUPL, Associate Director of International Law Center of CUPL, Standing Council-Member of China Space Law Institute, Standing Council-Member of Beijing International Law Association, Council-Member of Space Security Council of World Economic Forum.

Prof. LI graduated in 1999 in CUPL obtaining doctorate degree of law, specializing international law. His research field covers public international law, especially space law, and international economic law. Dr. LI obtained his bachelor degree on law in 1991, master degree on International Economic law in 1996 in CUPL.

Prof. LI published about 15 books and 20 articles on international law and international economic law.

As visiting professor, he taught law in Korea in 2004 and 2005 and Iceland in 2006. He also acted as a teacher for Chinese astronauts (Taikonauts) in China Astronaut Center.

LI Shouping

Biography

Prof. Dr. LI Shouping is a professor of international law and the Deputy Dean of Law School of Beijing Institute of Technology, the director of Space Law Institute of BIT. He is the editor in chief of Chinese Yearbook on Space Law. He was a visiting scholar of National Center for Remote Sensing, Air and Space Law of Mississippi University of the U.S. in 2010, Space Policy Institute of George Washington University of the U.S. in 2013. He is an executive director of Chinese Institute of Space law, a vice president of Chinese Institute of EU law, the General Secretary of Beijing Society of International law.

MA Xinmin

Biography

Ma Xinmin, currently Deputy Director-General at the Department of Treaty and Law of the Ministry of Foreign Affairs, is responsible for United Nations legal affairs, space law, diplomatic law and foreign immunity law. Mr. Ma joined the foreign service in 1993 and served successively in the Department of Treaty and Law of the Ministry of Foreign Affairs, Chinese Representative Office of Sino-British Joint Liaison Group in Hong Kong, Office of Commissioner of the Ministry of Foreign Affairs in Hong Kong SAR, Branch of Xinhua News Agency in Hong Kong SAR, Liaison Office of the Central Government in Hong Kong SAR, and the Chinese Embassy in the United States. Mr. Ma participated in the legal negotiation on handover of Hong Kong between China and the United Kingdom, and relevant work on the new institutional arrangement of Hong Kong SAR. Mr. Ma was core negotiator in many international negotiations including the treaties on extradition and legal assistance between China and Thailand, China and Russia, UN Comprehensive Treaty on Terrorism, the Protocol to Eiliminate Illicit Trade in Tobacco Products, and Criminal accountability of United Nations officials and experts on mission. Mr. Ma led the Chinese delegation in many conferences such as Session of the UNCOPUS and its Legal Subcommittee, Assembly of States Parties to the Rome Statute of the International Criminal Court, Conference of the parties to the Framework Convention on Tobacco Control, Conference of the parties to the United Nations Convention to Combat Desertification, and meetings of the General Assembly 6th Committee. He has published over 20 academic papers in various journals such as Chinese Journal of International Law, Chinese Yearbook of International Law. He also delivers speeches regularly in the international law forums, universities and research institutions.

Now he serves as legal adviser to the INBAR, member of the council of the Asian Society of international Law, the Chinese Society of International Law, and Chinese Society of Space Law.

Opening Ceremony

Development of International Space Law: Legal Framework, Objective and Orientation

The speech consists of two parts. The first part discusses on the legal framework of the current international space law and its structure and character. Then A comparative study is made on the relationship between space law and general international law, as well as other international norms on international public domain. This part concludes with the legal status and features of outer space and of space law. In the second part, the current challenges in international space law and its nature is analyzed. And this part also explores the rationality for policy choice and institutional framework which should be followed in the future development of international space law.

Irmgard MARBOE

Biography

Professor Dr. Irmgard Marboe is Professor of International Law at the Department of European, International and Comparative Law at the Law Faculty of the University of Vienna. She is the head of the Austrian National Point of Contact for Space Law of the European Centre for Space Law since 2009. Between 2009 and 2011 she was involved in the drafting of the Austrian Outer Space Act which entered into force on 28 December 2011. From 2008 to 2012 she was the chair of the Working Group on "National Space Legislation" of the Legal Subcommittee of UN Committee for the Peaceful Use of Outer Space which led to the formulation of "Recommendations on national legislation relevant to the peaceful exploration and use of outer space" adopted by the United Nations General Assembly as Resolution A/AC.105/RES/68/74 on 11 December 2013. She is the editor of the book on "Soft Law in Outer Space – The Function on Non-Binding norms in International Space Law" (Vienna 2012). Other publications in the area of space law deal with telecommunication and space, national space legislation, and the return of space objects and the rescue and return of astronauts. She has recently organised a conference on "Small satellites: Chances and Challenges" at the University of Vienna and will be editing a volume under the same title.

Other areas of interest include international investment law and arbitration, where she is a specialist in calculation of compensation and damages. Furthermore, she has published extensively on Islamic law and international aw and is the director of the biannual Vienna International Christian-Islamic Summer University.

Irmgard MARBOE

Abstract

Session 1

Space law treaties and soft law development

The space law treaties were elaborated and negotiated in the Legal Subcommittee of UNCOPUOS in the early decades of the spage age and in the midst of the Cold War. It was an important and remarkable achievement that agreement could be reached on rules and principles for the peaceful exploration and use of outer space that are in most respects still broadly accepted and observed today. However, after the successful conclusion of the Outer Space Treaty in 1967, the support by states of multilateral binding instruments governing space activities decreased. Each of the subsequent treaties has attracted less state parties, with the last of them, the Moon Agreement of 1979, having received only 15 ratifications until today.

The normative framework of space activities was henceforth developed and refined by other means, in particular by UN General Assembly resolutions. The most important resolutions dealt with direct broadcasting by satellites, satellite remote sensing, the use of nuclear power sources and cooperation in outer space. These resolutions were also elaborated and negotiated in the Legal Subcommittee of UNCOPUOS with the difference that the outcome was not a binding legal instrument but a document possessing only recommendatory character. Nevertheless, the normative value of such documents and their impact upon the behaviour of states and other space actors should not be underestimated. This is why GA Resolutions and other non-binding international instruments are often called 'soft-law'. This term is sometimes criticized as contradictive and inappropriate, but is nevertheless still widely used and serves as a term of reference to denote various texts which have no legally binding force but which are nonetheless meant to influence and also do influence the behaviour of States and private actors.

With the emergence of new space faring nations and the privatization and commercialization of space activities a number GA resolutions have been developed in the Legal Subcommittee of UNCOPUOS more recently. They addressed the definition of the concept of the launching state, registration practice and national space legislation.

Abstract

Session 3

General Assembly resolution 68/74 on recommendations on national legislation relevant to the peaceful exploration and use of outer space

The commercialization and privatization of space activities has shown the need of more detailed regulations on the national level. In the past years, many countries have engaged in elaborating and enacting national space legislation and many are still in the process of doing so. However, the practices and priorities of states vary considerably so that it is difficult to discern the most important considerations or concerns as well as the respective legal solutions to them. In view of the importance of such legislation and the diversity of existing state practice, the Legal Subcommittee of the UNCOPUOS decided, in 2007, to put a new item under a workplan entitled "General exchange of information relevant to the peaceful exploration and use of outer space" on its aganda. A working group was established under the chairmanship of the present speaker which carried out its work between 2008 and 2012. The outcome was a rather comprehensive report of the working group (A/AC.105/C.2/101), a set of "regulative categories" (attached in the Annex), and a schematic overview of national legislation relevant to the peaceful exploration and use of outer space (see http://www.unoosa.org/pdf/spacelaw/schem/schematic-overview_2014-03.pdf).

These documents reflect the exchange of information by the member states as well as conclusions by the working group. In 2013, consensus could be reached in UNCOPUOS that a draft resolution on "Recommendations on national legislation relevant to the peaceful exploration and use of outer space" should be proposed to the UN Generaly Assembly. This resolution was eventually adopted on 11 Devember 2013 (No 68/74). The recommendations are the result of an intensive and engaged exchange of information and experiences. They can therefore serve as a yardstick for present and future endeavours by states to develop or amend national space legislation.

Sergio MARCHISO

Biography

Full Professor of International and Airspace Law at the University Sapienza of Rome. Since 2007, Chairman of the European Centre for Space Law within the European Space Agency. Member of the Italian delegation to the UN Committee on the peaceful uses of outer space, where he served as Chairman of the Legal Subcommittee (2004-2006). In 2010, elected co-chair of the Expert Group D of the LTSSA Working Group of the STSC.

Italian Delegate to the European Union's CODUN Space and Member of the Task Force of the EEAS-EU for the International Draft International Code of Conduct on Space Activities. In 2012, appointed by the UN Secretary general member of the Group of Governmental Experts (GGE) on Outer Space Transparency and Confidence-Building Measures (TCBMs) established by General Assembly resolution 65/68

Between 2001-2011, chair of the Committee of Governmental Experts for the UNI-DROIT Space Assets Protocol to the Cape Town Convention. In 2012 Chair of the Commission of the Whole of the Berlin Diplomatic Conference which adopted the Protocol.

Member of the Specialized Panel of Arbitrators of the Permanent Court of Arbitration established pursuant to the Optional Rules for Arbitration of disputes related to space matters.

Member of the Board of the International Institute of Space Law (IISL), Full Member of the International Academy of Astronautics (IAA), Member of the Académie de l'air et l'espace (ANAE).

Since 2014, Member of the Managing Board of the Italian Space Agency.

Author of more than 100 publications in International Law, Law, European Union Law and Space Law.

Sergio MARCHISO

Abstract

Session 3

Promoting National Space Legislation: Experience and Prospects

States of the European Union and European Space Agency

The European Legal Framework: the European model of cooperation in outer space as a result of several decades of joint efforts among European States. The main actors: the European Space Agency (ESA), the European Union (EU), the Member States and their national space policies. The legal ties between the ESA and the EU through the ESA/UE Framework Agreement. The competences of the EU and the ESA in matters of space: does they cover national space legislation? Toward a common European legislation on space activities?

The national space legislation of the different European States: States are free as to the manner in which, domestically, they put themselves in the position to meet their international obligations; the choice between the direct reception and application of international law, or its transformation into national law by way of statute, is a matter of indifference, as is the choice between the various forms of legislation, common law, or administrative action as the means for giving effect to international obligations. The European States follow different models: the model with specific space legislation, such as the Austria, United Kingdom, Sweden, France and Belgium and the model which covers only some of the potential building blocks, such as Italy and Germany. The on-going drafting process for a national space legislation addressing authorization and licensing procedures for private activities is also relevant.

A comparative look at national space Laws: Main features with regard to the obligation of private operators to obtain a licence, sanctions for breach of the obligations, insurance obligation, liability for private operators, third parties liability, environmental supervision. Different institutional frameworks. Common elements.

National Space Legislation and Space Safety and Security: in case of non binding international instruments, such the debris mitigation guidelines, the adoption of regulatory measures with respect to their commitments, should be left to each interested State. Not necessarily soft law instruments require implementation through national legislation; more often policy measure are sufficient as well as administrative practices. However, the enactment of national space legislation is to be considered as a good indicator of national readiness and reliability towards international transparency and confidence building measures in space (TCBMs).

Tanja MASSON-ZWAAN

Biography

Tanja Masson-Zwaan is Asst. Professor and Deputy Director of the International Institute of Air and Space Law at Leiden University. Tanja is an expert in the field of air and space law since more than 25 years. She advises the Dutch government and the European Union on various matters, teaches and supervises students at Bachelors, Masters and PhD level, carries out various research activities, publishes on a broad range of topics, and was appointed by the Dutch Government as an arbitrator for space related disputes at the Permanent Court of Arbitration.

She is the current President of the International Institute of Space Law (IISL), elected in 2007 and re-elected in 2010 and 2013. In that capacity she is responsible for all IISL activities, including the IISL Colloquium, the Proceedings and the Manfred Lachs moot court competition.

Tanja lectured at many universities worldwide, set up courses in air and space law at the National University of Singapore, and worked as a consultant for a space insurance broker in France and in her own consulting company in the Netherlands. She attends the sessions of the UN Committee on the Peaceful Uses of Outer Space as an observer since more than ten years.

She is a recipient of the Distinguished Service Award of the IISL (2001) and of the Social Sciences Award of the International Academy of Astronautics, IAA (2008). She is an elected member of various professional associations, was a founding board member of Women in Aerospace-Europe and is an advisor to Mars One, to name a few.

For further information and a list of publications and presentations, see http://law.leiden.edu/organisation/publiclaw/iiasl/staff/masson-zwaan.html

Abstract

Session 4

The example of the European Space Agency (ESA)

This talk will explain ESA as a mechanism for regional cooperation in space activities, as input for the UNCOPUOS Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space.

The presentation will focus on ESA's institutional structure, including the Convention, the organs, and the relations with member states. It will address ESA's areas of cooperation and programs, including the relations with industry.

Specific attention will be paid to the evolving relations with the European Union, including structural arrangements and programmatic and policy implications and challenges.

The conclusions will indicate to what extent ESA could serve as an example for other regions.

Chukeat NOICHIM

Abstract

Session 3

Thai Space Law: Past, Present and Future Perspectives

A presentation entitled "THAI SPACE LAW: Past, Present and Future Perspectives" will be delivered by Dr. Chukeat Noichim. The presentation will cover the objective and function of the space development of Thailand, as a part of national development. Furthermore, there will also be information provided on the respect to be as membership of international and regional space-related organizations and as party of some United Nations space treaties. Finally the presentation will look into vital aspects in the planning of space legislation and will explain the reasons why National Space Law is necessary of the future Thai space activities.

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Shirish RAVAN

Biography

Shirish Ravan is Head of the UN-SPIDER Beijing Office administered by the United Nations Office for Outer Space Affairs. He brings in over 20 years of experience in earth observation and geo-spatial technologies in various sectors including disaster management, environmental monitoring, natural re-sources management, biodiversity research and infrastructure development planning.

He joined United Nations in 2004. He was stationed in Afghanistan from 2005 to 2009 to lead the Illicit Crop Monitoring Programme of the United Nations Office on Drugs and Crime. The programme aimed at monitoring opium cultivation and support counter-narcotic efforts in Afghanistan. Since 2009, he joined the United Nations Office for Outer Space Office based in Vienna.

Prior to joining the United Nations, he worked in centres of excellence in India including Indian Institute of Remote Sensing of the Indian Space Research Organisation (ISRO) and Centre for Development of Advanced Computing (C-DAC).

He holds a Bachelor degree in Horticulture, a Master in Environmen-tal Sciences and Doctorate in Forest Ecol-ogy. His doctoral research explored the remote sensing technology for forest ecosystem analysis (biomass and biodiversity assessment), and he has authored over 45 publications on the subject matter. He completed his doctoral research from Indian Institute of Remote Sensing (Indian Space Research Organisation), Dehradun, India in 1994.

Abstract

Session 6

The use of space-based information for development and disaster management: Policies and practices

Development and disaster management goes hand in hand. Currently United Nations and member states are engaged in framing Post-2015 Development Agenda to cope with the challenges due to fast developing World and increasing risks due to climate change. Building disaster resilience in developmental process is the key factor to achieve sustainable development, as a single disaster can undo years of hard-earned development. Space based information, especially remote sensing data, plays a key role in providing critical information needed for planning development, understand climate change, identify risks and mitigate impact of disasters. A model for acquisition, utilization and sharing of space based information is unique in each country and is governed by the institutional arrangements within the country and eventually by the policies related to data/information, which may or may not necessarily include space based or geospatial information. Often lack of 'data policy' in general, and 'geospatial policy' in particular in many developing countries, is one of the major factors that impacts timely acquisition, effective utilization and proper sharing of satellite data. Thus, potential of space based information and products remains underutilized. Based on the observation from the technical advisory missions conducted in several countries, the proposed presentation provides insight into the best practices, gaps and challenges with focus on the policies and practices related to space based information for development and disaster management.

Fariba RAZIPOUR

Abstract

Session 3

Iran: paving the way to sustainable national space law

Iran's first endeavor in space dates back to 1958 when established the United Nations ad-hoc

Committee on the Peaceful Uses of Outer Space with other 16 countries(later changed its name to the Committee on the Peaceful Uses of Outer Space : COPUOS). Because of a 9 year imposed war following the Islamic revolu on (1979), the country's space activities was halted un l 2004 when Iranian Space Agency (ISA) was established according to the law for tasks and the authorizations of the Ministry of Communications and Information Technology (CIT). Since then the agency has changed in structure and even in duties.

In this article the structure of ISA and its changes to meet the needs of coordinating with international space law will be reviewed and the first and only space law research group of Iran and its activities and future plans will be introduced. It shows how the space programs of Iran is facing international developments along with working hard on concluding national space law.

Bernhard SCHMIDT-TEDD

Biography

Dr. Bernhard Schmidt-Tedd studied law in Cologne and Geneva and holds a doctorate of the University of Cologne. He joined the German Aerospace Center (DLR) in 1987 and is currently Head of the Legal Support for DLR Space Agency Affairs. In this capacity he was involved in contract negotiations of different international space programmes. As an author of a number of articles, he lectures space law at the Institute of Space Systems at the University Stuttgart . With the Institute of Air and Space Law of the University of Cologne he realized several legal space projects and mentors practice-oriented doctoral theses. He is co-editor of the Cologne Commentary on Space Law (CoCoSL). Membership: IAA, Corresponding Member of the Russian Academy for Cosmonautics, IISL, ECSL and DGLR.

Abstract

Session 1

Perspectives on space-traffic management

Space-traffic management has been discussed as an open issue of space law since a long time, e. g. with the IAA Cosmic Study between 2001 and 2006. It is obvious that a fault-based liability in space is incomplete without traffic regulations. But the subject is not as simple as such. In recent times we see a number of different developments containing space-traffic management issues directly or indirectly, such as the Working Group of the Scientific and Technical Subcommittee of UN-COPUOS on Long-Term Sustainability of Outer Space Activities or the Governmental Group of Experts (GGE) on Outer Space Transparency and Confidence Building Measures as well as the EU proposal for a Code of Conduct for Outer Space Activities.

Space Traffic has a scientific-technical and a regulatory aspect, divided in three most relevant phases: launch, in-orbit operation and re-entry. Behind traffic rules is the need for Space Situational Awareness and a transparent notification system between space actors. This leads to a wider perspective of traffic rules.

It would be wise to develop the framework for a space traffic management before major accidents (including major space debris events) make the subject unavoidable. The presentation will show the interlinkage between the different subject matters of space traffic management.

SHANG Zhen

Biography

Mr. SHANG Zhen is Deputy Director in Department of Treaty and Law, Ministry of Foreign Affairs, People's Republic of China. He is responsible for public international law affairs, including United Nations legal affairs, space law, diplomatic law, international humanitarian law. Previously, he was deputy director of treaty division, and legal officer in the law of the sea division.

Mr. SHANG joined the foreign service in 2001, and has served as legal officer in the Permanent Mission of China to the United Nations, and in the Embassy of China in Malaysia. He was member of Chinese delegation to many international meetings, including 6th Committee and 4th Committee of the General Assembly of the United Nations, Sessions of the UNCOPUS and its subcommittees, Conference of the States Parties to the UN Convention on the Law of the Sea, Conference of the parties to the Framework Convention on Tobacco Control. He also participated in many negotiations on international treaties, including China's bilateral treaties on investment protection, tax exemption, social security, as well as multilateral treaties such as Convention on the Safety of United Nations and Associated Personnel, Protocol to Eiliminate Illicit Trade in Tobacco Products, Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation, Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft.

TIAN Yulong

Biography

Mr. TIAN Yulong, Secretary-General of China National Space Administration and Director General of the Department of System Engineering.

Mr. TIAN Yulong worked at the Department of Science and Technology of China Aerospace Corporation (reorganized as China Aerospace Science and Technology Corporation in 1999) before he started his service for China National Space Administration in 1998. Prior to his appointment as Secretary-General, Mr. Tian had served at various posts, including Deputy Director General of the Department of Science, Technology and Quality Control, the Department of System Engineering and the Earth Observation and Data Centre.

Mr. Tian earned bachelor's degree from Shenyang Aerospace University in 1985 and Doctor's Degree in Engineering from Huazhong University of Science and Technology in 2006.

WANG Guoyu

Biography

Wang Guoyu, Doctor of Law and Economics, Master, Bachelor of International Law, Jilin University, China. Deputy Director, Institute of Space Law, Beijing Institute of Technology (BIT) ; Associate Professor, Law School, BIT, China. Academy Senior Fellow(2014-), Chatham House (Royal Institute of International Affairs), U.K.. Visiting scholar, National Center for Remote Sensing, Air, and Space Law Mississippi University School of Law, U.S.. Director, Space Legal Department, DeHeng Law Firm.

Member of International Law Association (Space Law Committee), Member of International Institute of Law.

Chinese Delegate, 55th, 56th, 57th Session of the United Nation Committee on the Peaceful use of Outer Space (UNCOPUOS), 52nd, 53rd Session of the Legal-Subcommittee of UNCOPOUS, 51st Session of the Scientific and Technical-Subcommittee (STSC), 32nd Inter-Agency Space Debris Coordination Committee (IADC) Meeting. Chinese Expert, Long-term Sustainability of Outer Space Activities Working Group of STSC of UNCOPUOS.

Expertise: Legal and political analysis on emerging international mechanisms/forums for safety, security and long-term sustainability of outer space activities, and on space crisis management; National space legislation, in particular with the U.S., China.

WANG Jilian

Biography

Ms. WANG Jilian, Legal Counsel of China National Space Administration (CNSA), Director-General of Space Law Center and General Counsel of China Great Wall Industry Corporation.

Ms. WANG Jilian has been working with large scale state-owned enterprises for more than two decades, gaining extensive experience in both studies and practice of law in various fields, including space law, space-related transactions, export control program, merger and acquisition as well as reorganization. She is a member of the Board of Directors of China Institute of Space Law, managing director of the Finance and Industry Promotion Committee of Beijing Society of International Law, council member of the China Association of Corporate Counsel for Defense Industry, and serves in the group of experts for space treaty negotiations under the Ministry of Commerce. She holds Master Degree in Law from China University of Political Science and Law.

Abstract

Session 2

Legal Issues Related to Satellite Launch: China's Perspective

Given the importance of commercial satellite launch in outer space activities, countries capable of launching space objects usually nurtures a friendly regulatory environment for their launch service industry through national space legislation in line with their international obligations and liabilities prescribed in space treaties, to addresses license, registration, liability and other issues related to satellite launch. So does China.

1.Licensing

China's launch licensing regime is at present based on Interim Measures on the Administration of Permits for Civil Space Launch Projects (hereinafter the "Interim Measures"). To achieve the dual objectives of honoring international obligations and promoting industry development, the Interim Measures also include specific provisions to address various issues relating to launch permits.

2.Registration of Space Objects

China's regulation over registration of satellites launched into outer space is based on Administrative Measures for the Registration of Space Object (hereinafter the "Administrative Measures"). In conformity with the Registration Convention, the Administrative Measures prescribes for both domestic registration and international registration, administered by CNSA and Chinese Foreign Ministry respectively.

3.Liability

China has relevant provisions regarding the issue of liability relating to launch activities in the "Interim Measures". Launching parties in China have to assume part of the liability pursuant to national law or regulation, even if China is under the treaty obligation to be internationally liable for damages caused by the space object it has launched.

Conclusion

With the advancing of space technology and the extension of space activities, China has been making continuous efforts to improve its national legal regime concerning space launch activities, with a view to maintaining a friendly environment for China's international launch service providers. We believe that the legal framework for space launch activities will be further improved thanks to China's endeavor to formulate its national space law.

Maureen WILLIAMS

Biography

Professor Dr. Maureen Williams was educated at the Universities of Buenos Aires, Paris, Oxford and London (UCL) and has been visiting professor at the Lauterpacht Centre for International Law (Cambridge), Tulane University (New Orleans), theMax Planck Institute (Heidelberg) and Cologne University. Her doctoral thesis on Telecommunication Satellites was awarded first class honours. She holds chairs of international law in Argentina at the University of Buenos Aires and Belgrano University (Buenos Aires) and is currently a Senior Career Scientist ('investigadora superior') at the National Council for Scientific Research of Argentina (CONICET) and Director of Research Projects in International Law (www.conicet.gob.ar). Professor Williams is Chair of the Space Law Committee of the International Law Association (ILA) and Council member thereof, member of the Board of Directors of the International Institute of Space Law (IISL) and the Ibero American Institute of Air and Space Law in Madrid. She is full member of the International Academy of Astronautics and the Royal Institute of International Affairs in London and formed part of the Group of Experts of the Permanent Court of Arbitration for the drafting of Rules for dispute settlement in space law. Williams is part of the Group of Experts on the Teaching of Space Law, UNOOSA,Vienna. In June 2013 she represented the legal area in a Panel of Experts commemorating 50 years of women in space (COPUOS). She is author of various books and around 250 articles on international law/space law in UK, Argentina, USA, Germany, Spain and Brazil, among others.

Maureen WILLIAMS

The use of satellite data in international litigation: New developments and applications

Abstract

Session 6

As technology develops a myriad of new legal questions continue to surface in the field of remote sensing. First, the yet unresolved question of 'Satellite Data in International and National Litigation and its value as evidence in court, especially where very sensitive issues involving boundary disputes and sovereignty issues are concerned. Secondly, the effectiveness of Earth Observation Satellites (EOS) to control treaty behaviour, particularly regarding international environmental law, is still open to question. Thirdly, the confrontation of the principle of freedom of information and the protection of privacy, triggered by the current far-reaching space technology, is calling for a change of paradigm.

Part One of this paper includes perceptions and conclusions showing the way opinion was moving in the first decade of the new millennium and reviewing, in retrospect, the state of the art regarding the use of satellite data in court. At that time the predominant view indicated it should be given a more positive spin. The situation emerged as a result of some difficulties encountered by the ICJ and other international tribunals concerning the validity of earth observation data in international boundary disputes, such as Bahrain v. Qatar (2001), Cameroon v. Nigeria (2002), Indonesia v. Malaysia (2001/2002), Botswana v. Namibia (1999) and, in the field of arbitration, the Red Sea Islands (Eritea v. Yemen), decided by the PCA in 1999. In these cases the high precision of satellite data, when produced as a single means of evidence in court, was somewhat dwarfed by an aura of suspicion. Possibilities of forgery could not be discarded. The outcome was that the interpretation of satellite data by experts, instead of having clarifying effects for the court, created disorder, when the primary function of a court is to settle the case. This, in turn, lead to the conclusion that satellite imagery used in court was not the satellite data proper but the opinion of the experts called upon to interpret such data.

Part Two addresses the current international, regional and national scenarios which are opening a new chapter in the field of satellite data, its use in court and other recent developments. These include, inter alia, the using of remote sensing technologies for environmental protection, verification and treaty behaviour regarding arms control, natural disasters and water management. Moreover, Earth observation technologies have a major role in the area of sea level rise, a problem affecting both industrialised and developing countries. Finally, special attention is drawn to privacy issues and the protection of satellite data in light of the latest far-reaching technologies such as Google Earth. The general feeling is that the principle of freedom of information could no longer be applied in such extreme terms as was, for example, in the Sunday Times case (1979) decided by the European Court of Human Rights in and where the right of privacy suffered its worst defeat. Recent court decisions in some countries, such as the United Kingdom, are showing this trend in cases where freedom of the press is being overridden by the protection of privacy.

WU Yanhua

Biography

Mr. WU Yanhua, Vice Administrator of China National Space Administration.

In September 2014, Mr. WU Yanhua was appointed as Vice Administrator of China National Space Administration. Prior to his appointment, Mr. Wu worked for 12 years with China Aerospace Science and Technology Corporation (CASC), as Head of Finance Department from 2002 to 2004, as Chief Economic Manager from 2004 to 2005, as Chief Financial Officer from 2005 to 2013, and as Vice President from 2013 to 2014.

Mr. Wu started his career with China Academy of Launch Vehicle Technology (CALT) of CASC, where he had worked for 18 years since 1984 at various departments and in various roles. He holds a PhD degree in Management from Beihang University. He is a research fellow and a member of the International Academy of Astronautics.

XU Dazhe

Biography

In December 2013, Mr. XU Dazhe was appointed as Administrator of China National Space Administration, and the vice minister of Industry and Information Technology Ministry by the State Council.

Prior to the nomination to his current post, he was the Chairman of China Aerospace Science and Technology Corporation (CASC), in charge with implementing the ambitious agenda to transform CASC to one of the most competitive space companies in the world.

Mr. XU is also a member of the International Academy of Astronautics, academician of International Eurasian Academy of Sciences, and President of the Chinese Society of Astronautics.

Mr. XU started his career as an engineer in China Academy of Launch Vehicle Technology (CALT) of CASC, and successively held the position of Deputy Division Director, Deputy Director General, Vice President and President of CALT. He had served as the Vice President of CASC since December 2001 and the President of China Aerospace Science and Industry Corporation since June 2007.

Mr. XU earned a Bachelor and a Master Degree in Engineering Mechanics from Harbin Institute of Technology.

ZHANG Zhenjun

Biography

Prof ZHANG Zhenjun, Secretary General and Research Fellow of China Institute of Space Law, serves as founding editor-in-chief of Yearbook of Space Law Studies, with a Master of Laws from China and an MBA from the USA. With profound experience in strategic management and legal counsel in China's space industry, Prof ZHANG advises widely when serving as Expert of UNCOPUOS Working Group on Long Term Sustainability for Outer Space Activities since 2011 and as Chinese Delegation member to Sessions of UNCOPUOS since 2012. Prof ZHANG has been actively promoting China's space law capacity building, and has worked as organizer and keynote speaker for many seminars and moot court competitions on space law in China and beyond. As an author of many papers on space law/policy, he published a monograph titled "Study on the International Legal Regime Governing Lunar Resource Exploitation Activities" in 2012. Prof ZHANG served in 2013 as Legal Advisor to the Local Organizing Committee of the 64th IAC and as coordinator of the IISL-related events in particular.

Abstract

Session 5

The role of capacity-building in space law development at national level - from the perspective of China

Prof ZHANG Zhenjun, Secretary General of China Institute of Space Law, will illustrate the role of capacity-building in space law development using China as a sample of case study. The speaker will start with a quick review on the early history of China's space law studies, followed by a brief introduction to the formation and development of China's space law community. His speech will mainly focus on how China has been building its capacity in space law development at both national and international level, supported by a series of national practices which have in effect been creating value to the development and prosperity of space law at global level. China's experience in space law capacity-building could be well borrowed by other nations, as it is a typical case on how a developing nation should and could build a coherent space law community so as to help serve its space industry by promoting the rule of law philosophy in practice.

ZHAO Haifeng

Biography

Prof. ZHAO Haifeng, Director of the Institute of Space Law, Harbin Institute of Technology. He is a Professor of International Law from 2004, he published more than 20 books and 100 papers in Chinese, English and French on Space Law, International Courts and Tribunals, and European and Comparative Law, etc. He founded the first Chinese Space Law Review and has been the editor-in-Chief of the Journal. He is also Member of the International Editorial Board of 'Space Policy'.

He is a member of board of directors of the International Institute of Space Law (IISL), Vice-president of Chinese Society of European Law, Member of Board of Directors of Chinese Society of International Law. In the drafting of the PAC Optional Rules for Arbitration of Disputes Relating to Outer Space Activities, he was appointed to a member of the of the Advisory Group and was involved in the drafting work with other 12 leading experts in air and space law.

He teaches the courses of public international law, outer space law, international judicial system, WTO regulations and case law etc for postgraduate students. He has performed and directed several research projects concerning outer space law and international courts and tribunals from institutions of Chinese government and local authorities.

He got Bachelor Degree of Law in Peking University, in 1984, and Master Degree (D.E.A.) on European Criminal Law and Policy in the University of Paris I, France in 1996. During the period from 1984 to 1996, Prof. Zhao worked as Clerk and Judge in Supreme People's Court of China. After that he studied and worked in France for 8 years (1994-2002). From 2002-2004, he worked as Project Manager for European Union ("EU")-China Human Rights Network in Irish Center for Human Rights, National University of Ireland, Galway for 2 years.

Abstract

Session 1

Space Policy's development and its role

In the development of the space industry, space policy is playing a very important role. Space policies are relevant political decisions made by governments, space agencies, international organizations or theirs member states for the space development. Including national or international organizations' policies on civilian, military and commercial space projects, but also including national policies formulated for space industry. Space industry policy has played a role in guiding, motivating, coordinating and controlling space industry. The paper gives a discussion on the space policies of the United States, the Soviet Union and Russia, the EU and China, and analyses their roles. Through examining national space policies, it can be found that space policies are developing towards classification, regionalization and institutionalization, they pay more sand more attention to military space to ensure national security, emphasize the application of space technology, improve the country's competitiveness and technological level, develop space companies' mergers and acquisitions to become world-class enterprises, and develop international space cooperation. Looking to the future, countries will attach importance to the effectiveness of space development, accelerating the development of military space technology will lead to a new arms race, the competitive environment of the commercial space market will be more severe, and space companies are developing towards privatization and the combine of military and civilian. China's serial white papers - "China's Space", proclaims China's space policies to the world, other related space industrial policies announced by National Space Agency are the contents of space policies too. But China should also develop Space Law and the national space policies as early as possible, should formulate a long-term, clear space development planning and space technology development programs, as well as related subsidiary laws and programs as soon as possible, but also should improve policies in the fields of development and utilization of space technology, especially space industrial policies, so as to coordinate and plan the future of China's space.

ZHAO Yun

Biography

Professor ZHAO Yun studied at China University of Political Science and law in Beijing (LL.M and LL.B), Leiden University, the Netherlands (LL.M) and Erasmus University Rotterdam, the Netherlands (Ph.D). He is currently Professor of Law and Director for the Center for Chinese Law at the Faculty of Law of The University of Hong Kong. He is Arbitrator of the Hong Kong International Arbitration Center, South China International Economic and Trade Arbitration Commission, and Guangzhou Arbitration Commission; Arbitrator of Lehman-Brothers-related Investment Products Dispute Mediation and Arbitration Scheme; Panelist of the Asian Domain Name Dispute Resolution Center and of the Online Dispute Resolution Center of the CIETAC in Beijing. He is also founding Council Member of Hong Kong Internet Forum (HKIF), Honorary Member of Hong Kong Construction Arbitration Center, Member of International Institute of Space Law at Paris, Member of Asia Pacific Law Association and Beijing International Law Society, Judge of Manfred Lachs Space Law Moot. He sits in the editorial teams of several SSCI journals, including Hong Kong Law Journal (as China Law editor), Journal of East Asia and International Law (as Executive Editor). He is listed in Marquis Who's Who in the World. He is winner of Prof.Dr. I.H.Ph. Diederiks-Verschoor Award 2006 by International Institute of Space Law in France, the first winner of Isa Diederiks-Verschoor Prize in the Netherlands, and also first winner of SATA Prize by the Foundation of Development of International Law in Asia (DILA). He has more than 80 publications on various topics including particularly Dispute Resolution, Space Law, and International Economic Law. His recent publication include Dispute Resolution in Electronic Commerce (Martinus Nijhoff, 2005), Liberalization of Electronic Commerce and Law (Peking University Press, 2005), Space Commercialization and the Development of Space Law (Intellectual Property Press, 2008), Mediation Practice and Skills (Tsinghua University Press, 2011).

Abstract

Session 4

The Role of Bilateral and Multilateral Agreements in International Space Cooperation

International space cooperation can be achieved through various mechanisms. The conclusion of international agreements proves to be one major and effective mechanism for international space cooperation. Over the past years, many bilateral and multilateral agreements have been concluded, providing solid legal basis for space cooperation. This article examines the important role of these agreements in the process of international space cooperation and put forward suggestions on how to further facilitate the conclusion of international agreements so that international space cooperation can be carried out more effectively and in a wider scope of activities. It is believed that appropriate agreements, together with sustained engagement with the fast moving space economies, shall overcome numerous barriers to international cooperation, especially the cooperation between developing and developed countries. Wider and more frequent use of international agreements in space cooperation would in the end help to realize the ultimate goal of peaceful uses of outer space.