The Sixth Eilene M. Galloway Symposium on Critical Issues in Space Law
A Comparative Look at National Space Laws and Their International Implications
1 December 2011 – Cosmos Club, Washington D.C.

Report by Diane Howard, B.Sc., J.D., LL.M., DCL candidate (McGill University, Montreal)

The Sixth Eilene M. Galloway Symposium was held at the Cosmos Club on 1 December 2011 and hosted by the National Center for Remote Sensing, Air, and Space Law of the University of Mississippi and the International Institute of Space Law. It explored national space laws of a number of different States and their international implications.

Prof. Joanne Irene Gabrynowicz, Director of the National Center for Remote Sensing, Air and Space Law and **Mrs. Tanja Masson-Zwaan**, President of the International Institute of Space Law convened the symposium with welcoming remarks, noting the annual nature of the event over the course of the past few years and thanking **Dr. George Robinson** for graciously hosting the event, once again, at the Cosmos Club.

The symposium consisted of four sessions focusing on the national space laws of numerous countries (Austria, Belgium, China, France, Germany, Japan, Korea, Netherlands, UK, and USA) and a final fifth session, which compared and contrasted the international implications of these varying domestic space laws.

Session 1: Austria, Belgium, China

Chair: Prof. Joanne Irene Gabrynowicz

Presented by **Mrs. Tanja Masson-Zwaan** on behalf of **Prof. Irmgard Marboe**, Law Faculty of Vienna, this will be the first time the Austrian law is discussed. The text of the Austrian Outer Space Act was presented 11 October 2011 and was adopted today. There is a need because of two small satellites: Tugsat and Unibrite, which will be launched by universities in March 2012. Intended to maintain compliance with the existing space treaty framework, the law addresses issues of supervision, authorization, liability, and responsibility. It includes definitions parallel to those found in the Outer Space Treaty.

The second paper of the session, presented by **Jean-Francois Mayence**, Legal Unit "International Relations", Belgian Federal Office for Science Policy, summarized Belgian Space Law as it is now, and assessed current issues six years after adoption. Belgium adopted its space law mainly to comply with its obligations under the Outer Space Treaty, but also because of the Galileo Joint Undertaking based in Belgium, and the fact that ESA Redu is expanding to private activities. A further reason is the upcoming launch of PROBA, a small satellite developed and launched by ESA on behalf of Belgium. As a result, there was a need to clarify Belgium's international responsibility and jurisdiction.

The Belgian Space Law's provisions include: 1) the principle of authorization and supervision by the Minister or designated authorities for new activity or for transfer of activity; 2) the principle of precaution; 3) a national register for space objects; 4) remediation measures; and 5) the return of space debris by its citizens. The law does not specify a fixed amount of insurance.

The scope of the law's application is based upon definitions contained therein. For instance, the definition of "operator" which requires actual control, opens discussion regarding whether a cubesat is an actual activity. "Space object" is not defined (cf. international law). And, under Belgian jurisdiction is any location subject to the state's sovereignty, authority, or control except when a dedicated agreement exists saying otherwise.

The law prohibits unauthorized activities and it defines the scope of Belgian responsibility, sets up a national registry, and provides a framework for the OUFTI micro sat, which allows no maneuver or operations once launched. So far, no satellites have been authorized under the new law.

In the future, there may be a need for regulation on the use of space data, and regulation on the protection of critical infrastructure as per the EU directive. Another important question identified by Mr. Mayence concerns national jurisdiction on and onboard space objects (Article VIII Outer Space Treaty).

Next to speak was **Dr. Guoyu (Kevin) Wang**, Ph.D., Deputy Dean of the Institute of Space Law of Beijing Institute of Technology, and Associate Professor at the Beijing Institute of Technology School of Law. Dr. Wang is a visiting Scholar at the National Center for Remote Sensing, Air and Space Law at the University of Mississippi School of Law. His research focuses on improperly enlarged rights and obligations in China's national space documents.

After explaining the organizational structure of China's government, Dr. Wang discussed language used in the Moon Treaty and in the Chinese White Paper of 2006. Two Chinese words are used that are not spot-on translations of "common heritage". There is no legal meaning to "commonwealth", while there is to "joint possession". These are mistakes in translation and, in his opinion, should be corrected.

Session 2: France, Germany:

Speaking on the French Space Operations Act (FSOA) was **Philippe Clerc**, Head of Legal Department of the Centre National d'Etudes Spatiales (CNES), France. The FSOA deals with both space operations and data. It introduces the concepts of the "launching phase" and the "command phase" for operators, but does not address some things like human spaceflight, suborbital spaceflight (because the interaction with air law has yet to be determined), or inter-stellar travel. Cross waivers deal with effective control for operators.

Simple authorization is on a case-by-case basis, while licensing is general certification and broader. If a party launches a Cubesat that it cannot maneuver, that party must bear

the liability. The risk can be mitigated with a technical license.

The data regime is declarative, not authoritative.

Dr. Jürgen Drescher, Head, Washington Office, DLR, Germany, provided an update on the new German space strategy. Germany underwent a space policy shift in 2009. Before, space was aligned with education, but is now with economics. Research and development is not limited to space, but also includes debris, awareness, energy, etc.

The focus is on European cooperation; Germany is the biggest contributor to ESA, after France. Germany has developed a competitive space sector. The space strategy, approved in 2010, is the first comprehensive description of political objectives and guidelines since 2001. It is available in English on the BMWi website. The private sector and public-private partnerships are important. Space supports globalization, the knowledge society, climate change and preservation of essential natural resources, and whole-of-government preparedness.

Space should be benefit driven, motivated not just by a love of science, but also by the public good derived. Sustainability is the current focus.

Session 3: Japan, Korea:

Professor Setsuko Aoki, Faculty of Policy Management, Kelo University, gave a presentation on the national space law of Japan. After explaining the domestic laws in place to regulate space activities prior to 2008, she described the restructuring of space organizations by the Basic Space Law (BSL) of 2008. The BSL establishes strategic headquarters, ends the non-military policy, and promotes the commercialization of space. The Space Activities Act (SAA), adopted in 2009, implements Article VI of the OST, ensures the public health and safety, guarantees third party liability, promotes private space activities, and plays an active role in fulfilling international responsibility for the sustainable development of space. Like the UK law, it applies to launches anywhere, whether in the territory of Japan or not, if involving Japanese natural persons, corporations, and other legal entities founded by Japanese law. Not included in the SAA are human spaceflight, sea launch and air launch, remote sensing data policy, and promotion of space industry.

Presenting Korean domestic laws and treaties pertaining to space was **Professor Jae Gon Lee**, Dean, School of Law at Chungnam National University, Korea. Korea has a well-developed space program. Naro Space Center, 2009, is the thirteenth in world. Korea has launch vehicles, a launch site, and astronauts. There are three relevant agencies: MEST (Ministry of Education, Science and Technology), MKE (Ministry of Knowledge Economy), KARI. (Korean Aerospace Research Institute). There are three acts directly enacted for space and thirteen others indirectly: Aerospace Industry Development Act (1987), Outer Space Development Promotion Act (2005) (most important, has definitions, very comprehensive), and the Outer Space Damage Compensation Act (2008) (regulates on liability programs).

Korea has four Bilateral Agreements with three countries (Ukraine, Russia and unofficially with the US), described briefly below:

The Agreement with Ukraine (2006): aims to promote, intellectual property, defines liability as per Liability Convention, implementing agency: MEST (Korea) Ukraine space agency.

The Agreement with Russia (2004) and its Protocol (2006): similar to the Ukrainian bilateral, liability is through cross waiver instead of the Liability Convention, similar areas of cooperation.

The Ministerial Joint Report for Cooperation (MEST) with NASA (2009) (US): not official, negotiations are ongoing.

In conclusion, Korea would benefit from a coordinating agency, laws on remote sensing.

Session 4: Netherlands, UK, USA

Mrs. Tanja Masson-Zwaan, President of the International Institute of Space Law, again spoke, this time on the non-applicability of the Netherlands Space Activities Act to certain Dutch space activities. She focused on two problematic activities - Cubesats and suborbital flight from Curaçao.

Only one license has been granted under the Dutch Act so far, to SES New Skies, now World Skies.

The applicant gets a generic license for duration of activity in Netherlands, not for each launch. It does not cover Netherlands citizens' activities abroad, including from Curaçao. The national registry is different from the UN Registry; the UN registry only includes those for which NL considers itself to be the launching state.

"Procure" in the understanding of the Dutch government is limited to state procurement; this interpretation is not shared by all.

Curaçao is being encouraged to enact its own national legislation, although the process is slow.

Cubesats are 1-10 kg. Netherlands is one of the nanosat leaders in Europe. These used to be found mainly in universities but are now also emerging in small countries. Functions include research, ship navigation, earth observation. They are cheap, typically last about 2-3 months, and burn off completely upon reentry. The Dutch government does not intend to license them, as they do not fall under the definition of 'launch, guidance or operation' because they are usually not maneuverable, and it does not consider itself the launching state, since procurement by a private entity is not interpreted as 'procurement' under the `Liability Convention.

Professor Richard Crowther, Chief Engineer, UK Space Agency discussed the United Kingdom's Outer Space Act. As an engineer, he offered a practical view of the UK Act and process, as well as lessons learned over last 30 years.

Basically, the law lifts text from treaties and this drives the Act. Safety evaluation is key for them, either pertaining to the payload or launch.

So far, the only launch license granted is to Sea Launch. Numerous other licenses have been granted.

Prof. Joanne Irene Gabrynowicz, Director of the National Center for Remote Sensing, Air and Space Law addressed the evolution of US national space laws, describing the continuum of infrastructure→ commerce→ applications→ codification, and making the point that the law follows technology and geopolitics. Professor Gabrynowicz carefully explained each of the laws, from the 1958's National Aeronautics and Space Act (establishing NASA), through the 1984 Commercial Space Launch Act and 1988 Amendments, the 1984 Land Remote Sensing Commercialization Act and 1992 Land Remote Sensing Policy Act up to Commercial Space Law Amendments Act of 2004, ending up with discussion of the ISS Code of Conduct and the 2010 codification of Title 51 of the USC. This last brings all the US space laws into one location and was a proper introduction to the next speaker, **Mr. Robert Mark Sukol**, Senior Counsel, office of the Law Revision Counsel, US House of Representatives. Mr. Sukol described the process by which US law was reorganized, emphasizing that it simply restated existing law and improved organization, removing obsolete provisions where necessary. The result of his office's labors then went to the judiciary committee, where Title 51 was entered into law as the new norm.

Session 5: Compare and Contrast and International Implications; Moderator: **Professor Joanne Irene Gabrynowicz**

The panel consisted of **Mr. Dennis J. Burnett**, V.P. Trade Policy & Export Control EADS North America Inc.; **Professor Jonathan Galloway**, Lake Forest College; and **Mr. Stephen E. Smith**, Co-Chair Space Law Practice Group Sherman & Howard, LLC. Mr. Burnett began his remarks by discussing the relevance of domestic space legislation to private practice. He stated that governments should avoid any appearance of trying to avoid liability. Drafting should not occur in a vacuum. National security apparatus should be involved along with industry. He gave an example of EADS and DLR as a public-private partnership and spoke of how the German legislation was drafted. Mr. Burnett expressed a need for balanced legislation.

Professor Galloway spoke about competition, cooperation (politics plays a role in commercial contracts), and conflicts. He noted an anomaly in the cooperation with China between sectors of government branches.

Mr. Smith compared his typical time management as space lawyer counsel for a big space company in the past to what it will be in the future. He sees more intersection between contracts (private) and international treaties as countries begin to get onboard with their own domestic legislation. Practitioners will be dealing with international treaties more in the future.

After a question and answer session, thanks were again given to George Robinson for his assistance in securing the Cosmos Club for the symposium and the event was adjourned.