

ECSL

European Centre for Space Law

Bulletin of the European Centre for Space Law

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A Word from the President

"Daddy, is it much further to space?"

I cannot start these few lines without hailing two events of importance to the life and future of the ECSL:

- the victory of the European team from the University of Leiden in the final of the Manfred Lachs Space Law Moot Court Competition.
- the launch of the ECSL Legal Database (www.esa.int/SPECIALS/ECSL/), an invaluable source of information to all researchers and practitioners.

These two successes confirm my belief that the teaching of space law (broadly defined) deserves to be given much more prominence. Space law has taken on a cultural role by bringing different people together in agreement on shared guidelines on the purposes of all space activities, whether conducted by public or private bodies. It also facilitates the conduct of those activities, directing them towards the benefit of all countries, regardless of their level of economic or technical development. Space law will thus be a medium of international cooperation.

So it is clear that the knowledge and then the teaching of space law need to be developed. We are striving to remedy the shortfall in the number of States party to the treaties established under United Nations auspices, but what can be said about the teaching of space law? A few classes, a few hours, in a few university faculties here and there. While this is far from enough, I pay tribute to the dedicated few who do teach space law.

There are, of course, conferences and papers delivered by people conversant with this branch of the law – as often as not to an audience of their colleagues. The necessary progress will not be made until, and unless, at least the basic principles are taught in secondary schools and in the first years of law degree courses.

Considerable efforts are being made nowadays to promote science and technology, and there should be appropriate efforts to foster the understanding of the legal principles applicable to all progress and newly obtained knowledge in space activities.

Could not the teaching of astronomy, meteorology, telecommunications and other similar topics incorporate a few simple lessons about the legal and moral framework in which they are conducted?

Perhaps we would then not hear so many of the perfectly understandable questions from people who have not been taught at school that space is about cooperation and peace, about action to eradicate hunger, about seeing others through different eyes.

Dr G. Lafferranderie
Chairman of the European Centre for Space Law

Space Law and Mechanisms for Dispute Settlement

The issue of dispute settlement in the space sector has long been tackled from the angle of public international law, as well as from the International Court of Justice¹, the European Space Agency, international organisations of satellite telecommunication², and the ITU, which have set up mechanisms for the settlement of disputes³.

And yet, close examination of space case law proves that it falls not only under public international law, but also, and above all, under private law. Private companies are less and less hesitant about bringing a case before the courts if a dispute arises. The space sector is no longer spared litigation as it used to be in the 1980s when contracting partners systematically negotiated the settlement of their disputes out of court⁴.

Generally, one can classify disputes arising in the space sector into several broad categories: contracts, intellectual property, insurance law, and so on. These disputes are brought before state or arbitral courts. In this sector, where there are few prominent players, arbitration, which is mainly institutional (frequently under the competence of the Paris International Chamber of Commerce), has the advantage of limiting the scope of conflicts, making it easier for the litigants to go on working together afterwards. The discretion surrounding the debates and the conclusion – or even the dispute itself – in high-tech sectors such as this makes it even more difficult to gain knowledge of space sector case law.

Most disputes arise from contracts⁵. Disputes in this field are characterised by risk management, which is at the core of space contracts⁶, as well as manufacturing, launching and exploitation contracts. Clauses limiting liability and, especially, cross-waivers of liability – as in the case of *Intelsat vs. Martin Marietta*, in the aftermath of the *Titan*⁷ launch vehicle failure carrying *Intelsat VI* satellite and settled out of court⁸ – have appeared mostly before American courts. Similarly, during the 1980s, insurance companies brought proceedings against McDonnell Douglas after the failure of NASA launches, due to malfunctions of carried satellites⁹. The new tendency is to sue subcontractors,

as shown by *Astrium vs. TRW* (Astrium subcontractor) after defects appeared on solar panels (*Los Angeles District Court*). An example of a dispute in the space sector brought before the French courts – the Paris Court of Appeals, on 15 June 1988 – is the case *Red Sea Insurance et autres contre Société Aérospatiale, CAMAT et Arabsat*¹⁰. The dispute arose due to the malfunction of the satellite *Arabsat IA* launched by an Ariane rocket in February 1985. The Paris Court of Appeals considered applying the “garantie des vices cachés” (warranty of hidden defects), judging that *Aérospatiale*, the manufacturer of the satellite, had had to be aware of potential defects and, therefore, could not waive or limit its liability.

In insurance law, cases have been brought before the courts by insurers, despite cross-waivers of liability¹¹, and by the insured¹². Among dispute cases brought before the courts by the insured, one can mention *Echostar Satellite Corp. vs. its insurers*, which was submitted for arbitration, partly in London¹³, partly in New York City. The dispute concerns the notion of total loss of a satellite¹⁴. As far as they were concerned, the insurers decided, after having compensated several satellite operators, which suffered from breakdowns of satellites manufactured by Boeing, to start proceedings against Boeing. The case was submitted for arbitration before the Paris International Chamber of Commerce, citing gross negligence by the American company in the manufacturing of 702-type satellites¹⁵. The charges against Boeing are the failure to respect the procedures related to the tests and the retaining of information concerning those tests, notwithstanding the fact that Boeing knew about the ongoing problems of 702-type satellites and did nothing to remedy them.

In the area of intellectual property law, disputes generally concern patents infringement, and are brought before American courts. The most famous case being *Hughes Aircraft Co. vs. the United States* and had to do with the use of a patent related to speed control and height maintenance of a satellite¹⁶. Other cases followed¹⁷. Intellectual property issues also cover non-disclosure agreements¹⁸ and protection of end products, such as remote sensing data. One such case was brought

before the French courts and dealt with the reproduction by a company which made jigsaw puzzles commercialised from satellite images¹⁹. The court stated, “The remote sensing work is original, resulting from the personalised implementation of a complex technology through a transformation and improvement process, choices, particularly of colours, contrasts and luminosity, harmonization and of highlighting by softening the contours...” and accepted to hear the case on a charge of counterfeiting.

Other forms of disputes involve banks²⁰, antitrust (though these are no longer topical due to the privatisation of international organisations of satellite telecommunication) and environmental issues, even though the trend of American courts is to not decide in favour of environmentalists (protests include the launching of satellites carrying sources of nuclear energy²¹). Furthermore, companies in the space sector are not immune to disputes arising from business relations as was the case with *Loral vs. Alcatel Space*. After a first submission to American courts²², an arbitral court decided in favour of Alcatel²³.

The disputes are sometimes submitted for arbitration even though the satellite is not in space, but still being tested. During one of these tests run by *Aérospatiale*, a *Eutelsat* satellite was seriously damaged. Within the framework of CCI arbitration, *Eutelsat* made a claim for 200 million Euros in damages from *Alcatel Space*, the successor of *Aérospatiale*. The case was settled out of court²⁴.

The disputes involving the prominent players in the space sector are still limited in number, but such disputes are tending to become more frequent. In the same way, one cannot overlook the fact that the disputes submitted for arbitration remain confidential, and that specialised journals do not mention them. Space law is no longer free from disputes, which is only logical considering the growing commercialisation and privatisation of this branch of industry.

Laurence Ravillon

Maître de conférences à la Faculté de Droit de Dijon – France

- ¹ V.S. Vereshchetin, "The International Court of Justice as a Potential Forum for the Resolution of Space Law Disputes", in *Luft-un Weltraumrecht im 21. Jahrhundert, Air and Space Law in the 21st Century*, Liber Amicorum Karl-Heinz Böckstiegel, Carl Heymanns Verlag KG, 2001, pp. 476-483.
- ² Concerning this particular aspect, see the decisions on The European Space Agency's jurisdiction immunity, *Waite and Kennedy c/ Allemagne*, Decision of the European Court of Human Rights of February 18, 1999, *AFDI*, 1999, pp. 636-637. See also *Beer and Regan c/ Allemagne*, *JDI*, 2000, pp. 102-104 and *Paris Court of Appeal, Dame Ruperas c/ Eutelsat*, May 20 1999, *JDI*, 2000, pp. 766-776.
- ³ The Permanent Court of Arbitration/Peace Palace Papers, *Arbitration in Air, Space and Telecommunications Law - Enforcing Regulatory Measures*, The Hague/London/New York, Kluwer Law International, 2002.
- ⁴ P.L. Meredith, "Spacecraft Failure-Related Litigation in the United States: Many Failures, but Few Suits", *Proceedings IISL*, 1995, pp. 27-29.
- ⁵ S. Tucker, "Disputes Arising Out of Space Related Contracts: the Search of Intent", *Journal of Space Law*, 1992, vol. 20, n° 2, pp. 70-78.
- ⁶ S. Gorove, "The Growth of Space Law Through the Cases", *Journal of Space Law*, 1996, vol. 24, n° 1, pp. 1-21 and *Cases on Space Law. Texts, Comments and References*, *Journal of Space Law*, University, Mississippi, 1996.
- ⁷ F. Silane, "Civil Liability in Commercial Space Ventures under United States Space Law", in *L'exploitation commerciale de l'espace - Droit positif, droit prospectif*, under the supervision of Philippe Kahn, Credimi, Paris, Litec, 1992, pp. 233-244. *United District Court of Maryland*, 763 F. Supp. 1327, D. Md. 1991. – *United States Court of Appeals, Fourth Circuit*, October 21, 1992, 1992 WL 296869, 4th Cir. Md. See T. Masson-Zwaan, "The Martin Marietta Case or How to Safeguard Private Commercial Space Activities", *Air & Space Law*, February 1993, vol. XVIII, n° 1, pp. 16-24.
- ⁸ "Martin, Intelsat Agree to Settle Launch Suit", *Space News*, June 14-20, 1993, p. 2.
- ⁹ *Appalachian Insurance Co. vs. McDonnell Douglas Corp.*, 262 Cal. Rptr. 716 (1989), v. *Journal of Space Law* 1990, vol. 18, n° 1, pp. 41-44. – *Lexington Insurance Co. v/ McDonnell Douglas Corp.*, No. 481713 (Cal. Super. Ct., Orange Co., May 1990).
- ¹⁰ *RFDaérien*, 1988, pp. 201-204.
- ¹¹ See for instance the dispute by insurers vs. Spar Aerospace: P.B. de Selding, "Unprecedented Lawsuit Targets Spar Aerospace", *Space News*, July 28-August 3, 1997, pp. 1 and 21.
- ¹² *Western Union Corp. v/ Lexington Insurance Co*, Civ. No. 91-193 (JWB) (D.N.J.): problem related to the loss of operational capacity of a satellite, as well as to its evaluation.
- ¹³ *Echostar Satellite Corp. vs. Ace Bermuda Insurance Co.*
- ¹⁴ P. Dykewicz, "Echostar Gambles on Insurance", *Satellite News*, March 24, 2003, pp. 1 and 9, and "Echostar's Growth Trend Slows", *Satellite News*, November 17, 2003, pp. 1 and 8.
- ¹⁵ P.B. de Selding, "Insurers to Seek Payment from Boeing on 702 Claims", *Space News*, September 6, 2004, p. 20.
- ¹⁶ C.Q. Christol, "Judicial Protection of Intellectual Property: Hughes Aircraft vs. USA", *IISL*, 1994, pp. 145-153. – C. Q. Christol, "Persistence Pays Off: The Case of Hughes Aircraft Company vs. USA, 1976-1999", *IISL*, 1999, pp. 199-207.
- ¹⁷ *Lockheed Martin Corp. vs. Space Systems/Loral In*, *United States Court of Appeals for the Federal Circuit*, 249 F. 3d 1314; 58 U.S.P.Q. 2d 1671, April 30, 2001, <http://www.ll.georgetown.edu/FedCt/Circuit/fed/opinions/00-1310.html>.
- ¹⁸ *Assuresat Inc. vs. Boeing Satellite Systems and Hughes Electronics Corp*, *Space News*, June 2, 2003, p. 4, *News Digest: Satellite Maker Accused of Stealing Trade Secrets*.
- ¹⁹ Ph. Gaudrat, "La Terre vue d'en haut sur les puzzles des amateurs d'en bas: brèves observations à propos de Riom (Com. 14 mai 2003)", *RTD com.*, 2004, pp. 308-312.
- ²⁰ *The Chase Manhattan Bank vs. Motorola*, *New York State Court*, filed June 9, 2000, www.telecommnow.com/satellite.lasso.
- ²¹ *Florida Coalition for Peace and Justice v/ George Herbert Walker Bush*, Civ. Action No. 89-2682 OG (D.D.C. 1989) and Civ. Action No. 89-2682-OG (D.D.C. 1990), *Journal of Space Law*, 1993, vol. 21, n° 2, pp. 167-170; *Green Party vs. Clinton*, 980 F. Supp. 11060 (D. Haw. 1997), *Journal of Space Law*, 1999, vol. 27, n° 2, p. 174: concerning the launching by NASA of the Cassini satellite, whose payload contained plutonium. The claim was rejected because NASA had studied the impact on the environment and respected the National Environmental Policy Act.
- ²² Jamal Henni, "Alcatel réclame à Loral 300 millions de dollars", *Les Echos*, 3 décembre 2001, p. 20.
- ²³ "En bref : Alcatel Space gagne une manche dans son procès contre Loral", *Les Echos*, 3 février 2003, p. 16. – P.B. de Selding, "Arbitration Panel Sides with Loral in Dispute with Alcatel", *Space News*, February 10, 2003, p. 13.
- ²⁴ *Les Echos*, 20 et 21 avril 2001, p. 20.

Digital Divide

Definition of the digital divide

The term "digital divide" describes the fact that the world can be divided into people who have, and people who do not have, access to Information and Communication Technologies (ICTs), such as the telephone, television, or the Internet. It is a new form of inequality.

An international divide exists among countries. The digital divide exists not only between developed and developing countries, but also between Western and Eastern Europe or even among the regional localities of a country. Other divides arise from differences in income, age, education, etc.

Measure and factors relating to the digital divide

According to the International Telecommunication Union (ITU), the digital divide is measured by infostate criteria, as the combination of infodensity and info-use. Infodensity refers to the ICTs capital and labour stocks, and their role in the productive capacity of the economy. Info-use refers to the uptake of various ICTs by households, businesses and governments, and the intensity of their actual use.

The two main factors explaining the digital divide are the localised nature of the services supplied by terrestrial technologies and the commercial motivations of the operators. That is the reason why areas of high population density get priority access.

Legal sources for bridging the digital divide

The first principle is freedom of information which states "everyone has the right to seek, receive and impart information and ideas through any media regardless of frontiers" (1948 UDHR, Article 19). The second principle is universal service (US), which obligates one or more operators of electronic communications networks and/or services to provide a minimum set of services to all users, regardless of their geographical location within the national territory, at an affordable price.

Competitiveness of satellites among broadband access technologies

There are two categories of Internet access technology, which are grouped in wired (ADSL, Cable, FTTH, PLC) and wireless (WLL, UMTS, WLAN, satellite). Wired technologies can hardly cope with the geographical digital divide in a short period of time, as it is too costly to achieve a full coverage of large territories. Wireless technologies are better able to bridge the digital divide because they are more flexible and rapid to deploy.

Satellites have the inherent ability to remove regional disparities and assure access to all parts of a region. The satellite can provide immediate solutions to respond to the urgent needs in areas. However, one of the major barriers to the broadband satellite systems is the issue of the price, specifically with the high cost of terrestrial terminals, which could be brought down by mass production.

The international community should support the relevance of having a world-wide market for broadband products and services. A universal technical standard is necessary to foster mass production with regard to equipment manufacturing, especially with regard to user terminals. Lower equipments costs would benefit all users, particularly in developing countries.

Cooperation for bridging the digital divide

At the international level, the World Summit on Information Society was initiated by a resolution of the ITU and endorsed by a resolution of the United Nations General Assembly in January 2002. There are two phases: the first phase in Geneva (10-12 December 2003) and the second in Tunis (16-18 November 2005).

Member States of ITU, assembled in Geneva, set up the Declaration of Principles: "Building the Information Society: a Global Challenge in the New Millennium". They declare their desire to

build a people-centred, inclusive and development-oriented information society, where everyone can create, access, utilise and share information and knowledge. This Declaration of Principles is realised by the Plan of Action, which seeks concrete actions (funding mechanisms, identification of areas for possible improvements, etc.).

At the European level, Member States of the European Union share common values and cultures, but they have very different realities between countries. EU leaders agreed on an ambitious goal for Europe: to become the world's most competitive and dynamic knowledge-based economy, with more and better jobs, and greater social cohesion. To reach this goal, the European Commission devised a comprehensive strategy, the Europe 2005 Action Plan. The plan develops modern public services through widespread availability of broadband access at competitive prices and a secure information infrastructure. Additionally, the European Community (EC) is initiating, together with European Space Agency (ESA), a cost-benefit study on a space-based solution in comparison with a ground-based infrastructures.

It is essential to maintain coherence between various initiatives in order to provide the service to a wider geographical area and to more efficiently use common space resources (orbital slots, frequencies, satellites, launch).

Bridging the digital divide has one main objective: to provide high quality services at low prices to citizens. However, there is another important challenge, which is to ensure citizens a certain quality of contents. And in this context, governments are the main players.

Delphine Gomes De Sousa
IDEST

The ECSL Summer Course on Space Law and Policy

School of Law, University of Graz, Austria

6-17 September 2004

Report

The ECSL did it once again and, once again, it was a delightful success.

The traditional ECSL Summer Course, the 13th of the series, took place at the School of Law of the University of Graz, Austria, from the 6 to 17 September.

This year's event "took off" at the Vienna international airport, where most of the students arrived from many countries: Albania, Austria, Estonia, Finland, France, Germany, Greece, Italy, Hungary, Kazakhstan, Lithuania, Italy, Poland, Romania, Spain, Turkey, Ukraine and United Kingdom, as well as two students from Kenya and Colombia studying at European universities. After the normal and understandable sense of unease (why am I here, who are these people?), students started to make friends and during the following two weeks, an atmosphere of camaraderie and conviviality reined among them. From Vienna, we all took the bus to our final destination, Graz. There, Alexandre Soucek (Austria), one of the 4 tutors, gave us useful information about the city and the University.

The University of Graz was founded in 1585. Following the personal commitment of Prof. Dr. Willibald Riedler, Graz has taken over an important and prominent role in Austrian space research. The number of scientists, its institutions and companies dealing with space matters is considerable. This is the reason why Graz - the capital of Styria (a federal state of Austria) - is called "The Secret Capital of Space Law in Austria" among insiders.

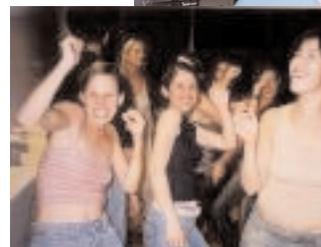
During the two weeks of the summer course several other space-related events took place in Graz. From 6 to 9 September, the Space Research Institute of the Austrian Academy of Sciences organised a summer university under the motto "Graz in Space - Recent Space Research", in cooperation with the University of Graz Institute for Geophysics, Astrophysics and Meteorology. At the Technical University of Graz a space exhibition was opened on the 6th. And, from the 13th to the 16th, the UN/Austria/ESA Conference on Space Applications for Sustainable Development to Support the Plan of Implementation of

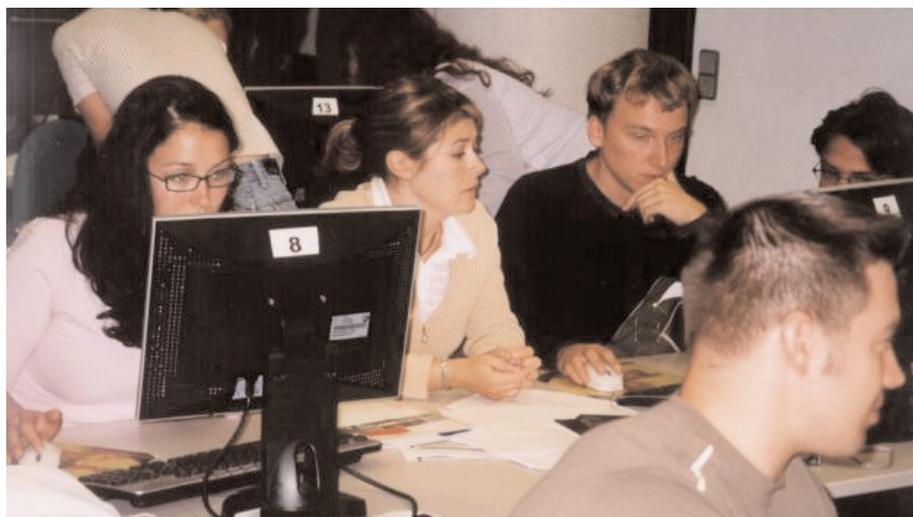
the World Summit on Sustainable Development titled, "Water for the World: Space Solutions for Water Management" was our guest in Graz.

On Monday the 6th, after a short sleep, the lectures officially started for the ECSL students. Representatives from the Austrian Federal Ministry for Transport, Innovation and Technology, Ms. Andrea Kleinsasser and Ms. Katharina Grabenhofer; representatives from the local Styrian government and the City of Graz, including Peter Piffel-percevic; the rectors of two of the four universities, Univ. Prof. Dr. DI Hans Sünkel and Univ. Prof. Dr. Alfred Gutschelhofer, welcomed the students.

The Summer Course programme was again split into two parts (this format has proved to be effective). During the first week, students received an overview of the international legal framework of space activities, the history and the relevance of the five UN treaties dealing with outer space, the major actors active in the space scene (international, regional and national agencies, as well as private entities), and the main interests at stake. The second week was devoted to more technical aspects and focused on issues such as ESA/EU relations, remote sensing, Earth observation, as well as taking a closer look at Eutelsat and Eumetsat, insurance and contacts in the space sector.

At the beginning of the course, students were divided into several groups (8 teams with a maximum of two students from the same country in order to encourage cultural exchange). Prof. P. Achilleas then briefed the groups on the case they would have to analyse and develop. Indeed, this year's exercise was based on a (fictional) call for tender issued by ESA. Students had to come up with feasible projects (from the legal and technical point of view) in order to bridge the digital divide in Europe and to promote development. For this purpose, each student group represented a consortium of public and private entities (they were free to choose the composition of the consortium, i.e. public or private entities only or joint ventures between the two). At the end of the course, the consortia explained and defended their





divide were thrilling. The panel of experts was amazed by the remarkable quality of the presentations, achieved in only two weeks' time. So to all the students, BRAVO!!!!

All of the students agreed that the ECSL Summer Course was a unique life experience, which allowed them not only to familiarise themselves with the space sector, but also to establish contacts and friendships, and to enjoy cultural exchanges at a truly international level (you can read their reports). Moreover, the students enjoyed Graz with its nice town and friendly people.

Such a success would have not been possible without the generous and warm welcome of the University of Graz, School of Law, and the Austrian Federal Ministry for Transport, Innovation and Technology. The ECSL is sincerely grateful to Prof. C. Brunner and his team, led by Dr. E. Walter and Ms A. Lauer, for their total commitment in the preparation of the event and for their support during the two weeks of the course.

We would like also to mention the excellent work done by the four tutors (Ms. E. Patkos, Ms. R. Kazancigil, Mr A. Franzolin and Mr A. Soucek) in helping the students to carry out their research and to prepare the group exercise.

It is worth noting that several European universities have agreed to give credits to their students attending the course. The

projects during a ten minute presentation. A further challenge was that all group members had to take the floor at least once during the presentation (to introduce the project or to answer to the questions). A panel of experts, chaired by Prof. Brunner, selected the proposal that had the strongest legal background and that had addressed the problem of the digital divide in the most effective, efficient and realistic manner.

The ECSL managed to bring together highly qualified lecturers from different European universities, the European Space Agency, national space agencies and the private sector (in particular, exposés by Dr. Prof. V. Kopal, former Chairman of the COPUOS Legal Subcommittee; Ambassador Dr. Jankowitsch; Dr. S. Plattard, the newly appointed Secretary General of the

European Space Policy Institute, ESPI; Dr. N. Malysheva, Deputy Director of the Ukrainian International Centre for Space Law).

This year's 53 students greatly outnumbered the normal ECSL participation in the Summer Course. This is due to the generosity of the University of Graz, which supported in extra funding to cover accommodation expenses, and to the proximity of Austria to Central and Eastern European countries.

Comments received from the students have been positive and encouraging. Though some students remarked that the schedule was tight and the workload heavy (the ECSL will take note), the results from each group/consortium in presenting detailed projects to bridge the digital

growing number of applications the ECSL receives also proves that the Summer Course is now a well established and well known course.

If you would like further information on the structure of the course and on the deadline to register for the 2005 session, visit our

new website www.esa.int/SPECIALS/ECESL/. If you intend to apply for the ECSL Summer Course, remember that you have to contact one of the ECSL National Points of Contacts (NPOCs) – you will find all the relevant information of the NPOCs on the ECSL website.

The proceedings of the course will be published in due course.

The Organisers:

ECSL/School of Law, University of Graz
 Prof. Christian Br nner
 Andrea Lauer
 Alberto Marchini

The Manfred Lachs Space Law Moot Court Competition: the World Finals

EUROPE IS THE WINNER

The ECSL is extremely proud to announce that team from Leiden University, the Netherlands, won the final of the prestigious Manfred Lachs Space Law Moot Court Competition. This is the first time since 2000 that the prize has been awarded to a European university. Moreover, the Leiden Team also received the prize for the Best Written Brief!

The ECSL would like to praise the team's remarkable performance and strong command of international law and space law demonstrated by Nathan Horsley (agent/co-agent); Ioana Cristoiu (agent/co-agent); Taras Ploshchansky (back-up person) and by their Coach, Axelle Cartier; and, of course, the ECSL would like to thank Prof. F. Von der Dunk for his long commitment in training good students. The ECSL would like also to thank the benches of the European Rounds (Prof. B. Impallomeni, Dr. Schmidt-Tedd, Prof. Lyall, Dr. Van Fenema, Prof. Kerrest and Prof. Achilleas) and the judges of the written briefs for their excellent work in identifying the best European team.

The ECSL is confident that the members of the Leiden Team will benefit from this experience and will become successful jurists.

The Manfred Lachs Space Law Moot Court Competition was founded in 1992 and is organised annually by the International Institute of Space Law (IISL). Each year, the regional winners of Asia-Pacific, Europe and the United States compete in the world finals held in conjunction with the annual International Astronautical Congress. The Lachs Moot has the distinction of having its world final judged by three sitting judges of the International Court of Justice every year. This year's judges were: Judge Koroma (President), Judge Rezek and Judge Vereshchetin.

The finals were held at the Faculty of Law of the University of British Columbia (UBC) in Vancouver, on 7 October, during the 55th International Astronautical Congress (4-8 October). The Leiden Team received the highest marks for the written brief which automatically placed it in the finals. Leiden



The judges (front row, l to r) Judge Vereshchetin, Judge Koroma (President), Judge Rezek. The WINNERS – Leiden University Team with (back row, l to r) Ioana Cristoiu (agent/co-agent), Taras Ploshchansky (back-up person), Nathan Horsley (agent/co-agent).

then mooted against the team from Georgetown University (USA) and won first place. Third place went to Bangalore University, India. The year's case involved issues relevant to International Responsibility and Liability onboard the International Space Station.

After the competition, the IISL invited all the participants and its members to a dinner at the Cecil Green Park House of the UBC.

For more information on the competition or to download the 2005 problem, please visit the competition's website: <http://www.spacemoot.org/> or the ECSL website: <http://www.esa.int/SPECIALS/ECESL/>.

The Calendar for the 2005 European Round is as follows:

January 14	Registration
February 4	Clarifications
February 25	Memorials

European rounds: date and location to be determined.



(Back row, l to r) The two participants from Georgetown University (1st runner up), Cristoiu, Ploshchansky, Dr. N. Jasentuliyana (IISL President), Horsley, the three participants from the University of Bangalore (2nd runner up).

**INTERNATIONAL INSTITUTE OF SPACE LAW
OF THE INTERNATIONAL ASTRONAUTICAL FEDERATION**

**INSTITUT INTERNATIONAL DE DROIT SPATIAL
DE LA FEDERATION ASTRONAUTIQUE INTERNATIONALE**

THE 2005 MANFRED LACHS SPACE LAW MOOT COURT COMPETITION

INTERNATIONAL COURT OF JUSTICE

SPECIAL AGREEMENT

BETWEEN

DELTASTAN
(APPLICANT)

AND

GAMMALAND
(RESPONDENT)

JOINTLY NOTIFIED TO THE COURT ON 22 NOVEMBER 2004

COUR INTERNATIONALE DE JUSTICE

COMPROMIS

ENTRE

DELTASTAN
(REQUÉRANT)

ET

GAMMALAND
(RÉPONDANT)

NOTIFIÉ CONJOINTEMENT À LA COUR LE 22 NOVEMBRE 2004

CASE CONCERNING INTERNATIONAL LIABILITY

Deltastan v Gammaland

STATEMENT OF FACTS

1. The National Agency of Space ("NAS") and the Ministry of Defense ("MOD") of Deltastan funded the development of the "Space Elevator" project. The basic concept of the Space Elevator project was to develop sufficiently long nanotubes of pure carbon to create a lightweight carbon tether of sufficient length and strength to allow a space station to be anchored to the Earth's surface. A crawler (known as the "Golden Orb" for its actual, not virtual, web crawling abilities) was developed to climb the tether and reinforce the tether by creating a very narrow (only a few nanotubes thick) but fairly wide (several millimeters) ribbon (the "Super String"). NAS also developed the crawler power system, communications system and the space and Earth anchors.
2. Deployment of the Space Elevator components was initiated soon after funding was secured and commercial operations were turned over to a government-chartered company, the Space Elevator Corporation.
3. Construction of the Space Elevator began with the launch of the Alpha Station: a space station with propulsion communications and a payload consisting of a reel of Super String attached to a drogue. Alpha station was launched by a conventional expendable launch vehicle from Deltastan into a geostationary orbital location over the middle of the Pacific Ocean. Alpha Station deployed a very large solar array that provided electrical power. Alpha Station then reeled out the Super String attached to a drogue that had its own propulsion system to decelerate as it was lowered. As the drogue was reeled out on the Super String, the increased forces of attraction from Earth's gravity on the decelerating drogue were balanced by increasing the altitude and velocity of Alpha Station. Careful balance of these forces maintained the geostationary location and the center of mass in the geostationary orbit of the entire structure.
4. The drogue was captured and attached to the Sea Anchor: a semi-submersible self-propelled oil-drilling platform that was stationed in the middle of the Maric Ocean at approximately the same latitude and longitude of the Alpha Station, some 10,000 kilometers west of Deltastan. Sea Anchor was temporally anchored to the ocean floor (but is movable).
5. The Golden Orb traversed up and down the Super String to reinforce and strengthen the tether. Power for the Golden Orb was provided by laser systems on both Alpha Station (with a solar generator) and from Sea Anchor (using conventional electrical generating system). Additional Super Strings then were connected between Sea Anchor and Alpha Station to improve its strength.
6. Space Elevator then began providing commercial transportation services for civilian customers and for the Deltastan MOD. Artificial Earth satellites were transported by Golden Orbs to various altitudes and released into low Earth orbits, medium Earth orbits and geostationary orbits.
7. Simultaneously with the commercial development of Space Elevator, Alpha Station was replaced by Drachen Station. Drachen Station was transported up the Super String a piece at a time and when assembled at the end of the Super String was a human rated station with 'return to Earth capabilities'. When Drachen Station was completed, Alpha Station was untethered and was sent on trajectory toward the Sun.
8. Drachen Station was then manned by civilian employees of the Space Elevator Corporation who were reserve officers of Deltastan's armed forces. Drachen Station's laser power system was then secretly upgraded to double as a laser weapons system and as a power source for the Golden Orbs that were crawling up and down the Super Strings. Powerful radar tracking and targeting systems also were added to Drachen Station. Drachen Station became a fully capable mid-course interceptor system for missile defense.
9. Gammaland is a new space faring nation and is not an ally of Deltastan. Both countries are located on the equator but are separated by more than 10,000 kilometers by the Maric Ocean. Gammaland opposed the development of Space Elevator on the grounds that Space Elevator would harm its domestic launch services industry and because it feared that the Space Elevator could be used as an element of a missile defense system that could reduce the deterrence effectiveness of Gammaland's small but growing intercontinental ballistic missile system.
10. Gammaland devoted significant intelligence resources to monitor the development of Space Elevator. Although Deltastan declared a 200-kilometre defensive zone around Sea Anchor, Gammaland vessels and aircraft regularly made incursions into the defensive zone.
11. Gammaland also initiated a secret program for the development and launch of a stealthy "Inspector" satellite that could be used to monitor payloads being transported by Space Elevator. The Inspector was secretly launched as a dual payload with a communications satellite (GammaSat II) and placed into geostationary orbit over Gammaland. Inspector was stationed at a location near where the Space Elevator Super Strings passed through the geostationary orbital arc. Inspector relayed data by a new line of sight intersatellite laser link to GammaSat II.
12. Drachen Station detected the movement of Inspector soon after its deployment from its launch vehicle and tracked Inspector to its position near the Super Strings. Visual inspection of the GammaSat II and Inspector from Earth confirmed the existence of laser "antennas" that appeared to be designed and pointed for an intersatellite link between Inspector and GammaSat II.
13. The close proximity of Inspector to the Space Elevator was considered by Deltastan to be threatening and a cause of concern for the safety of Space Elevator and her personnel. However, the Deltastan Ministry of Defense decided that they would like to have a closer look at Inspector before confronting Gammaland because the Inspector was a significant leap in technology development for Gammaland of which Deltastan had not been aware.

14. Space Elevator then suffered a series of operational accidents that caused Deltastan to convene an Investigation Board to ensure that it was safe for continued manned operation. All activities except supply of Drachen Station were suspended during the investigation.
15. During the investigation, Deltastan constructed a special payload to gather intelligence about Inspector. As the investigation drew to a close, the press reported that the first payload to be transported by Space Elevator after clearance by the Investigation Board would be super-secret black nanosatellite program that would operate in a new artificial intelligence network. Mike Frighton, a famous Science Fiction author with numerous books dealing with nanotechnology, was interviewed by the press for comments on the nanosatellites. Deltastan's MOD vigorously denied the existence of any such program.
16. Gammaland Ministry of Defense decided that a close look at Deltastan's newest payload was warranted. While a closer proximity of Inspector to the Super String might increase the possibility of detection of Inspector, the potential intelligence reward appeared to justify that risk. Inspector was moved to within several kilometers of the Super String and waited for the payload to pass through the geostationary arc where it could be observed in some detail.
17. Upon resumption of service, the Golden Orb ascended with its payload slowly making its way to Drachen. However, at the point closest to the Inspector it stopped. Deltastan announced that there had been a failure of the Golden Orb and that efforts were underway to effect repairs. A Golden Orb with a repair module was dispatched for rescue.
18. In the meantime, sensors were collecting data about Inspector. Photographic evidence of Inspector was obtained as well as other data. Deltastan confronted Gammaland with evidence of the Inspector and its proximity to the Space Elevator and demanded that Inspector be moved at least 1,000 kilometers away from Space Elevator.
19. After vigorous protests, threats and counter-threats, Gammaland informed Deltastan that Inspector would be moved to a position not less than 1,000 kilometers from the Space Elevator. The Inspector was then commanded to reposition. The propulsion system was fully engaged to reposition quickly, all the while being monitored by Deltastan. The spectrographic analysis of the propulsion ignition revealed a new means of propulsion.
20. After the repositioning of Inspector, a storm developed in the Pacific. Forecasts indicated high winds and large swells would develop at the location of Sea Anchor. The repositioning of Sea Anchor and Drachen was initiated and Drachen Station was put on defensive alert as a precaution.
21. In the midst of the maneuver a cascade failure of the Super Strings occurred that resulted in the severance of the Super Strings. On Drachen Station those events were interpreted as an attack on the Space Elevator. The laser weapons system executed a series of preprogrammed firings on all spacecraft that had been identified by the weapon systems as potential foes. Inspector was the first spacecraft destroyed followed by GammaSat II, another geostationary satellite located over Gammaland, and four LEO Earth observation satellites (two military spy satellites and two civilian weather satellites) in near polar orbits, (two of which were in orbits that passed over Deltastan but two of which were in orbits which did not pass over Deltastan or come within 10,000 kilometers of the Space Elevator). All of the destroyed spacecraft belonged to Gammaland.
22. Drachen Station then began an emergency crew rescue sequence. Within seconds, Drachen Station was reduced to a crew return vehicle, and began a series of maneuvers to decelerate, reenter the Earth's atmosphere and return to the Earth's surface. However, Drachen Station was unable to execute the vehicle return sequence. A landing in Deltastan or in any other country friendly to Deltastan could not be accomplished and that the only choice was an emergency landing in Gammaland. Drachen was immediately seized by the armed forces of Gammaland and the crew was arrested and incarcerated. Gammaland then began a systematic disassembly and analysis of Drachen and its equipment.
23. Deltastan fighter aircraft then forced all Gammaland aircraft in the area of Sea Anchor to land immediately on territory of a country allied with Deltastan or be shot down. Three aircraft were grounded, the aircraft seized and the crews put under arrest.
24. Twenty-three thousand miles of Super String then began to reenter the atmosphere. Some larger segments fell harmlessly into the sea, other segments began an acceleration through space towards Earth and burned up on reentry into the atmosphere. Other segments of Super String disintegrated into various lengths of nano-fiber and floated to the Earth, primarily in Gammaland but some in the territorial waters of Deltastan.
25. While both countries were immediately on a war footing, cool heads prevailed and no further actions were initiated. Deltastan demanded that Gammaland return Drachen and her crew. Gammaland refused to return the Drachen crew because they were criminals who had destroyed Gammaland property and had landed in Gammaland without authorization. Gammaland also demanded that Deltastan compensate Gammaland for the destroyed satellites. Finally, Gammaland demanded that Deltastan return Gammaland aircraft and their crews. Deltastan responded that the Gammaland aircraft and crews were being held as prisoners of war and that Gammaland had attacked and destroyed Space Elevator without warning. Deltastan accused Gammaland of violating the UN Charter by waging aggressive war against Gammaland and demanded that Gammaland reimburse Deltastan for the damage of the Space Elevator. Gammaland responded that Deltastan was guilty of aggression against Gammaland in violation of the United Nations charter and that Deltastan should reimburse Gammaland for the environmental and health damage caused by the pollution of Gammaland with carbon nano-fibers. Deltastan countered with demands for environmental damage to Deltastan fisheries.
26. After protracted negotiations, Deltastan and Gammaland agreed that an independent investigative Commission would be chosen to investigate what had happened and that the Commission's results would be accepted by both countries. If there were any remaining legal issues that could not be resolved by negotiation after the results of the Commission were released, those issues would be submitted to the International Court of Justice for resolution. The Drachen crew was returned to Deltastan but Gammaland refused to return the Drachen on the basis that it was an aggressive weapons system and Gammaland had no obligation to return it. The Gammaland aircraft and their crews were returned to Gammaland unharmed.
27. In a unanimous opinion, the Commission determined that the most likely failure of the Super Strings that initiated the incident was a decomposition of the carbon nanotubes and the decomposition of ribbon adhesive connecting the nanotubes, both caused by the propulsion exhaust of the Inspector spacecraft. Inspector used a newly invented bipropellant that left a highly

reactive stream of molecules in orbit whenever the Inspector was maneuvered. When maneuvering quickly away from the Space Elevator, the trajectory chosen by Inspector resulted in a stream of propulsion molecules that collided with the Super String. Laboratory analysis demonstrated that the propellant had a corrosive effect on both the nanotube carbon lattice and the adhesive quality of the material that was used to connect the nanotube fibers. The largest amount of damage was caused within a few minutes of the maneuver of Inspector but additional damage was caused each time a stream of propulsion molecules completed another orbit and collided with Super String.

28. Following the issuance of the findings of the Commission, Deltastan demanded full compensation from Gammaland for damage to the Space Elevator caused by the Inspector propulsion exhaust, for environmental damage to the geostationary orbit caused by the Inspector propulsion exhaust, and for return of Drachen. Gammaland counter demanded for a declaration that the stationing of the laser weapons system on Drachen was in violation of international law and requested full compensation from Deltastan for damage to its satellites and for environmental damage caused by the carbon nanotube fibers.
29. Deltastan and Gammaland have agreed that the issues of the legality of the weapons system on Drachen and the contamination of the geostationary orbit shall not be issues considered in this proceeding. Both Parties also have agreed that issues related to the forced landing of Gammaland aircraft return of the crews (both the crew of Gammaland aircraft the crew of Drachen Station) and have been resolved and shall not be adjudicated.
30. Both Parties have agreed to refer the case to the International Court of Justice ("ICJ") and have jointly stipulated the facts published in this Special Agreement.
31. Both Deltastan and Gammaland have ratified the Outer Space Treaty, the Agreement on the Rescue and Return of Astronauts, the Liability Convention, and the Registration Convention. Neither Deltastan nor Gammaland have signed or ratified the Moon Agreement and Deltastan does not recognize the Moon Agreement as being part of international law.
32. Alpha Station was registered by Deltastan in accordance with the Registration Convention and lists Deltastan as the State of Registry.
33. Neither Drachen Station nor any other part of Space Elevator was registered by Deltastan in accordance with the Registration Convention.
34. Inspector was not registered by Gammaland in accordance with the Registration Convention.

ISSUES

The ICJ has determined that any issues of the amount of damage shall be deferred until after the Court decides the liability issues. Briefs and arguments should not speculate nor comment on the amount of damages.

The following issues are reserved for briefing and argument to the Court under the agreed Special Agreement. There are no issues of jurisdiction or standing, and briefs and arguments with regard to the issues or remedies are to be confined solely to legal issues, not issues of fact.

1. Whether Gammaland is liable under international law for:
 - (a) damage to the Space Elevator, and
 - (b) to return the Drachen spacecraft and for damages to the Drachen caused by Gammaland;
 - (c) for damage to Deltastan fisheries.
2. Whether Deltastan is liable under international law for:
 - (a) damage to the Gammaland satellites, and
 - (b) the cost of Gammaland clean-up and environmental damage to Gammaland.

The Experience of a Moot Court Team Coach

At the welcoming reception of the 55th IAC, Dr. Martha Mejía-Kaiser (Mexico), introduced me to Dr. Mohsen Bahrami, delegate from Iran, as the trainer of the Leiden University Moot Court team. This is definitely the correct term.

The Leiden University team (Ms. Ioana Cristoiu, Mr. Nathanael Horsley and Mr. Taras Plushchansky; all three students of the LL.M. in International Air and Space Law), which I had the honour to coach for a year, was representing the applicant against Georgetown University, respondent, during the world finals of the M. Lachs Moot Court at the University of British Columbia in Vancouver on 7 October 2004.

When the 5 minutes of rebuttal of the applicant came to an end, I believe it was then that I realised that a year of work had just been accomplished.

The Leiden students dealt very well with the stress and did a very good job. I remember telling them the day before the finals that I was, of course, proud that they had come this far (and did not miss their plane for Vancouver!), and that I wanted them, at this point, to give a good pleading and be happy with their achievement, whatever the final result may be. Georgetown was an excellent opponent. The co-agent of Georgetown, Ms. Melinda Beiting received the Sterns and Tennen Award for the Best Oralist.

The three judges of the International Court of Justice, H.E. Judge Koroma (President), H.E. Judge Vereshchetin and H.E. Judge Resek had excellent and tricky questions for both teams which gave us, the coaches, a very difficult time. I was in the back of the UBC Moot Court room and underwent every possible stage of stress for the duration of the moot court. A 'normal experience' is what I was told by Steven Freeland, senior lecturer at the University of Western Sydney, who had been the coach of the Australian team two years before.

And then the deliberations came to an end, and the Court came back. And a new bout of stress with it...

First came the announcement of the winner for the best written brief (Leiden University), then pictures of the team were taken! Next, the award for best oralist (Georgetown), followed by more picture taking! The final results were revealed starting with the second runner-up, Bangalore University, India – more pictures – and then the first runner-up, Georgetown University.

It was at this very moment that we all knew that Leiden University had won.

The team is very happy and proud to have brought the trophy back to Europe. We now have a new building for the Leiden University Faculty of Law, where the trophy will be displayed, as a final touch to the decor.

This accomplishment would not have been possible without quite some help and support. On behalf of the team, I would like to thank: the IISL, Leiden University, the International Institute of Air and Space law (IIASL), Prof.

Haanappel, Dr. Frans von der Dunk, Paula van der Wulp (our office manager who helped wonderfully with the logistics!); Tanja Masson-Zwaan, the ESTEC staff (particularly Drs. Isakaite and Agniezska, who did a wonderful job welcoming us at ESTEC for the European Round in March); ESA and, of course, the ECSL, Prof. Lafferanderie and Alberto Marchini.

Axelle Cartier

Registration for the 2005 Manfred Lachs Space Law Moot Court Competition

In order to register for the 2005 Manfred Lachs Space Law Moot Court Competition, duly and clearly fill in the following information and send to:

Alberto Marchini, European Centre for Space Law (ECSL) Secretariat
(Ref.: Moot Court)
c/o European Space Agency
8/10 rue Mario-Nikis, F-75738 Paris Cedex 15

Tel: +33-1-53.69.76.05
Fax: +33-1-53.69.7560
e-mail: alberto.marchini@esa.int

Registration forms must be received by Friday, 14 January 2005.

Further information on the organisation, the deadlines, the rules and the problem can be found at:
www.spacemoot.org

Registration Form

Professor/Coach:

University:

Department:

Address:

Tel.: Fax.: E-mail:

Students (use a separate sheet for each student):

First Name:

Family Name:

University:

Course/Major:

Address:

Tel.: Fax.: E-mail:

Each team has to identify one reference person in the group with whom the ECSL will establish contact and exchange information.

47th IISL International Colloquium on the Law of Outer Space

The International Institute of Space Law (IISL) was founded by the International Astronautical Federation (IAF) in 1960. The IISL replaced the permanent Committee on Space Law which IAF had created in 1958 under the chairmanship of Andrew G. Haley.

The purposes and objectives of the Institute include the cooperation with appropriate international organisations and national institutions in the field of space law, the holding of meetings, colloquia and competitions on juridical and social science aspects of space activities, the preparation or commissioning of studies and reports, and the publication of books and proceedings.

In the beautiful setting provided by the city of Vancouver, Canada, the 47th IISL International Colloquium on the Law of Outer Space took place during the International Astronautical Congress (4-8 October 2004).

The colloquium stretched over 4 days of intense discussions divided into 5 sessions, namely: New Developments in National Space Legislation (Chairs: Prof. S. Hobe & Dr. F. von der Dunk); International Law and Practice of Agreements on Cooperation Regarding Space Activities (Chairs: Mr. M. Ferrazzani & Ms I. Heed); A General Convention on Space Law (Chairs: Prof. R. Jakhu & Mr. S. Mosteshar); Legal Issues Relating to Private Enterprise, Property Rights and Space Applications (Chairs: Prof. S. Marchisio & Dr. S. Ospina); Other Matters: Telecommunications, NPS and Military Implications (Chairs: Dr. K.U. Schrogl & Ms. L. M. Stojak).

According to the well-established tradition of IISL's colloquia, very thought-provoking papers were presented, each followed by challenging debates and exchange of views. The 47th IISL International Colloquium on Outer Space was well attended and participants expressed very positive remarks on the

content of the papers and on the organisation of the sessions.

On 6 October, all IISL members and participants of the 47th IISL Symposium were invited to attend "European Space Programmes: An Introduction for Lawyers", held at the ESA Stand in the Exhibition Centre, giving an overview of some technical aspects of major EU/ESA programmes.

The proceedings of the colloquium will be published by the AIAA in Spring 2005.

For further information, please contact:
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Alberto Marchini

The Expanding Leiden IIASL Teaching Programme

In the academic year 2000-2001, the International Institute of Air and Space Law (IIASL) in Leiden started a one-year full-time post-graduate Master of Laws (LL.M.) Programme in International Air and Space Law. The programme consisted first of all of the following six core teaching modules.

Public Air Law: Treaties and Institutions. This course covers the Chicago Convention system on international civil aviation, including its drafting history, bilateral air service agreements, criminal law treaties and arrangements, the International Civil Aviation Organisation, the International Air Transport Association, and other public and private organisations, both world-wide and regional, such as ACAC, AFCAC, LACAC, ECAC, ICC, OECD, UNCTAD and WTO.

Private Air Law: Treaties and Cases.

The course deals with introductory private law notions, with the Warsaw system of air carrier liability, third party liability (for compensation with respect to third parties on the ground), rights and securities in aircraft, liability of air traffic controllers, manufactures and operators of airports and more recent regulations, including the Montreal convention of 1999 and EC legislation as well as court decisions.

Space Law: Treaties and Law Making.

This course discusses the genesis, substance and future of the *corpus iuris spatialis* (consisting of the Outer Space Treaty, including its drafting history, the Rescue and Return Agreement, the Liability Convention, the Registration Convention and the Moon Agreement), more recent UN international legal instruments at the level of so-called

Principles, and the institutional legislative process in relation to law-making for outer space activities, with particular emphasis on law-making in the United Nations Committee on the Peaceful Uses of Outer Space.

Furthermore, a special project will focus on the policy issues behind the law making process, both at the international and at the national level.

Space Law: Applications, Institutions and National Law.

This course covers the legal and policy aspects of current and future outer space activities, both space and earth oriented, such as research and development programmes, remote sensing, military uses, telecommunications, direct roadcasting, copyright implications, private space activities including launching, space transportation systems, and GNSS. The

many special institutions and intergovernmental organisations involved will be dealt with, such as ESA, INTELSAT, INMARSAT, EUTELSAT and EUMETSAT. Also, the implementation of the international rules at the domestic level by means of national space legislation will be covered.

Air Transport Competition Law and Policy.

As aerospace activities are increasingly privatised, corporatised or commercialised, the application of anti-trust and competition laws takes on a special significance. This seminar deals with EU competition and US anti-trust law and policy. Special attention will be given to the attempts to harmonise the application of competition law and policy at the intergovernmental level.

European Aerospace law. This course examines recent developments in air and space law, with particular reference to Europe and the European institutional context. At the present time, such recent developments include EU & ESA space programmes; aviation safety issues including the Revised Eurocontrol Convention; the Galileo and GMES programmes; EU air transport liberalisation and EU competition law as applied to air and space activities including slot allocation; and private law issues such as airline alliances, airport privatisation, environmental protection, the application of world-wide air carrier liability rules in a European context, and licensing of telecommunications operators.

Depending upon particular interests and qualifications, additional courses were added to the programme. In addition to the six core teaching modules, two more mandatory requirements formed part of the core curriculum as follows.

Elective Course or Internship. With the assistance of and subject to the approval of the Programme Director participants will either follow a complementary course in another programme, or they will do an internship in an airline, airport, space industry company, satellite communications company, law firm, civil aviation or other governmental authority or international organisation in the field of aviation or space activities.

LL.M. Thesis. Participants have to write a thesis based upon dedicated research, under the supervision of a Faculty

member, according to Faculty rules, on a subject of air and/or space law and policy.

The LL.M. Programme, which is currently in its fifth year, was annually attended by around fifteen participants, from literally all corners of the world – including from space powers such as the United States, Russia, China, Japan, Indonesia, India, France, Germany and Italy as well as from countries such as Peru, Namibia, United Arab Emirates, Macedonia and Serbia. About half of the participants were freshly graduated from university or college, looking for a career in air or space law; the other half were practitioners with working experiences in the relevant fields ranging from a few to as much as twenty years, making for a very interesting and lively class interaction.

In the course of the first few years of the programme it soon became apparent that, in addition to the interest in the basic, full-year LL.M. Programme, there was substantial interest in the programme itself or certain parts of it which could not be accommodated by that version of the programme. As a consequence, over the last years the IASL has developed alternative options to the basic programme.

Firstly, a prolonged version of the programme was established, which allowed the participants to take two-and-a-half years maximum for conforming with all the requirements. This allowed, in particular, participants with professional obligations to spend in this time frame just two periods of some four months in Leiden for the six mandatory modules.

Secondly, it became possible to participate in individual teaching modules, allowing for even more flexibility and less need for long-term presence in Leiden. For the purpose of the particular module(s) involved, the student was part of the LL.M. class and had to fulfil the same requirements. At the end, instead of an LL.M. Diploma he or she would be given a Modular Certificate.

Thirdly, as of the present academic year (2004-2005) it has become possible to offer to very ambitious candidates an LL.M./MBA Joint Degree Programme in Aerospace Studies in conjunction with the Leiden University School of Management.

The Joint Degree Programme within the span of twelve months comprises an international workshop, four mandatory courses in basic management, four mandatory courses from the LL.M. programme (Public Air Law: Treaties and Institutions; Private Air Law: Treaties and Cases; Space Law: Treaties and Law Making; and Space law: Applications, Institutions and National Law), an elective course, a projects workshop as well as a thesis or consulting project. For the air and space law courses, candidates form part of the LL.M. class.

Fourthly, in principle, as per the academic year 2005-2006 it would also be possible for professionals to follow a blended learning version of the LL.M. Programme, requiring only limited physical presence in Leiden whilst most of the interaction and teaching will be conducted over the Internet in a controlled and secure environment.

Finally, since a number of LL.M. students saw the LL.M. as an excellent first step to a Ph.D. in Leiden in air and/or space law, the IASL has decided to offer a paid Ph.D. Programme to all those who do not qualify for a paid Ph.D. position at Leiden University. Candidates, of which currently a handful have started their research activities, are provided with a guaranteed number of contact hours with a promotor and a co-promotor, as well as access to necessary faculty and other facilities, IASL workshops and other events.

It is with this extended range of post-graduate teaching and supervision programmes that the IASL hopes to continue to increase knowledge and understanding of the legal aspects of space activities – one of the core missions of the European Centre for Space Law – and to enhance the opportunities for young graduates to start a career in the space industry from a legal point of departure, and for professionals to boost such a career already started. For more information, you may wish to contact the Institute at +31-71-5277724 (phone), +31-71-5277600 (fax) or P.vanderwulp@law.leidenuniv.nl (e-mail), or visit the Institute's website at <http://www.publiekrecht.leidenuniv.nl/index.php3?m=32&c=>

Dr. Frans G. von der Dunk

Announcement

New Book: 'Droit des activités spatiales – Adaptation aux phénomènes de commercialisation et de privatisation'

Until recently, the space sector involved players that were essentially from the public sector. Little by little, the space industry became aware of the commercial potential of outer space, and space activities have been subjected both to commercialisation and privatisation, even though States are still very much involved, owing to the heavy expenditure involved in the setting up of space projects. This commercialisation has led to the birth of new private operators in space, such as private companies, privatised state-owned companies, international organisations in the process of being privatised, which are not the natural addressees of the traditional instruments of space law. This book focuses on the technical, statutory (European space policy, American legislation), industrial (mergers in the space sector), and legal mutations, which have had an impact on the space sector. This book also gives a survey of the privatisation and commercialisation of different branches of industry (launching, satellite telecommunication, Earth observation, satellite navigation and the International Space Station). Owing to a cross-disciplinary approach, the consequences of the phenomena of commercialisation and privatisation can then be divulged. In this regard, the developments are spectacular and extremely swift. They mostly affect the way space activities are financed, but also have an impact on the insurance sector and on contract law (to which special attention has been paid because it reveals the changing relations in power between the prominent players of the space industry – satellite manufacturers, launch companies, satellite owners). The power struggles are being redefined, so that the risks weighing on each space industry participant are changing.

Written by Laurence Ravillon, with the participation of Sébastien Manciaux and Annie Martin-Moreno, *Droit des activités spatiales – Adaptation aux phénomènes de commercialisation et de privatisation*, Paris, Litec, 2004, foreword by Simone Courteix, 678 pages.

Price : 80 euros – ISBN 2-7110-0429-5

Laurence Ravillon is a Professor at the University of Burgundy, Dijon (Faculty of Law), where she teaches International Commercial Law. She also teaches Space Law at the University of Paris I (La Sorbonne), Paris II (Sceaux), and Aix-en Provence (Iurta). Sébastien Manciaux is a Professor at the University of Burgundy, where he teaches International Law of Investments. Annie Martin-Moreno is a researcher at the "Centre National de la Recherche Scientifique".

Contact: Laurence Ravillon, Faculté de Droit, 4 boulevard Gabriel 21000 Dijon, France; Laurence.Ravillon@u-bourgogne.fr

Announcement

Two New Books Coming Soon!

Professor Frank Lyall (University of Aberdeen, Scotland, and a member of the ECSL Board) and Professor Paul Larsen (Georgetown Law Center, Georgetown University, Washington D.C.) are collaborating in the production of two books on Space Law. One will appear in the series *The Library of Essays in International Law*, while the other will be a free-standing monograph; both from Ashgate Publishing.

Books in the *Library of Essays* series consist of a collection of articles by various authors which have already been published, together with commentary and some updated information supplied by the editors. The purpose is to give an overview of the area of law concerned. Articles of historic interest, as well as more up-to-date discussions and expositions are included. As many (if not most) law libraries do not contain a large range of space law journals, it is hoped that this space law compilation will provide a useful source for students and for those engaged in teaching space law.

The other book which Professors Lyall and Larsen are working on is a discursive text on space law. Their interest in space law began when they were in the 1963-64 class at the Institute of Air and Space Law at McGill University, Montreal, then taught by the redoubtable Ivan Vlasic. Thereafter, they have followed, with interest, this area of law as it has developed. Professor Lyall has been an academic throughout these years. Professor Larsen has been academically involved, teaching a course on space law at Georgetown, while simultaneously being employed within the legal department of the U.S. Department of Transport. In this latter position he has been involved in many negotiations concerning Space Law, including GPS questions and the UNIDROIT Space Protocol. He therefore brings a practical eye to their joint enterprise. Both are well-known for their writings on space law in the *Proceedings of the International Institute of Space Law*, and elsewhere.

It is hoped that their monograph on space law will be useful in the teaching of the field, as well as contributing to its further development. The intention is that both books will be published in the first half of 2006.

Upcoming Events

20-21 January 2005:

Project 2001 Plus Workshop on "Current Issues in the Registration of Space Objects", Berlin, Germany (contact: Mr S. Mick, e-mail: Stephan.mick@uni-koeln.de)

21 February-4 March 2005:

UNCOPUOS Scientific & Technical Subcommittee, Vienna, Austria

21-23 February 2005:

International Astronautical Federation (IAF) - Eurisy Symposium: "New Space Services for Maritime Users: The Impact of Satellite Legislation on Maritime Legislation", Paris, France (eurisy@wanadoo.fr, www.iafastro.com/)

17 March 2005:

43rd ECSL Board Meeting, ESA Headquarters, Paris, France

18 March 2005:

ECSL Practitioners Forum, "IT Convergence", ESA Headquarters, Paris, France (contact: alberto.marchini@esa.int)

4-15 April 2005:

UNCOPUOS Legal Subcommittee, Vienna, Austria

4 April 2005:

ECSL-IISL Annual Symposium on: "Remote Sensing Practices in Relation to Remote Sensing Principles", Vienna, Austria (contact: Ms T. Masson, tanja@lesmasson.com)

18-20 April 2004:

4th European Conference on Space Debris, ESOC, Darmstadt, Germany (www.esa.int/spacedebris2005)

26-28 April 2005:

Centre Régional de Télédétection des Etats de l'Afrique du Nord (CRTEAN)-ECSL, Symposium on "Natural Disasters and the Role of Remote Sensing: Legal and Economical Considerations", Tunis, Tunisia (contact: alberto.marchini@esa.int)

8-10 June 2005:

Institute of Air and Space Law of the University of Cologne and the German Aerospace Center (DLR) "Project 2001 Plus - Global and European Challenges for Air and Space Law at the Edge of the 21st Century", Maternushaus Cologne, Germany (contact: Mr S. Mick, e-mail: Stephan.mick@uni-koeln.de)

8-17 June 2005:

UNCOPUOS Main Committee, Vienna, Austria

May-early June 2005:

European Rounds of the Manfred Lachs Space Law Moot Court Competition: dates and location to be announced (www.spacemoot.org)

Announcement

Practitioners' Forum: IT Convergence

ESA Headquarters, Paris France

18 March 2005

(available seats: 130)

At its meeting on 28 October, the ECSL Board decided to hold the next Practitioners' Forum on Friday, 18 March 2005. The Forum will concentrate on the telecommunication field. Convergence, commercialisation and market developments have continued since our last Forum on telecom. The precise programme has yet to be established, but intended topics include WTO, ITU, WSIS (the 'Digital Divide'), and EU responses to new needs, the supervision of privatised organisations, and the opportunities and problems in running a telecom legal practice. There will be time for discussion. Note it in your diary! (contact: alberto.marchini@esa.int)

ECSL Practitioners' Forum 2005, Registration Form

'IT Convergence', ESA Headquarters, 18 March 2005

Maximum participants: 130

Please fill in the form below and send it **before Friday, 4 March 2005** to:

ECSL Secretariat (Ref.: Practitioners' Forum 2003)

c/o ESA, 8-10 rue Mario-Nikes, F-75738 Paris Cedex 15

France

Tel.: + 33 (0)1 53 69 76 05

Fax: +33 (0)1 53 69 75 60

Email: alberto.marchini@esa.int

Name.....

Firm/University/other.....

Address.....

.....

.....

Phone.....

Fax.....

E-mail.....

This form has to be accompanied by the payment of the following membership fees:

- Students: 20 euros
- Other participants: 50 euros

I hereby apply for registration as:

- Student
- Other individual participant

I enclose my payment by:

- Bank check made out to ESA/ECSL
- Bank transfer to Barclays Bank, Agence Segur, compte 01484830189, RIB 96, Guichet 62019, Code Banque 30588, Att. ESA/ECSL

Date: _____

Signature: _____

Application for ECSL Membership - 2005

The time has come for you to apply for, or renew, your ECSL **annual** membership for 2005 (**valid from 01/01/2005 to 31/12/2005**) in order to allow the ECSL to carry out its tasks and be active in the space sector.

Please fill in the form below and send it back to:

ECSL Secretariat (Ref.: Membership)

c/o ESA, 8-10 rue Mario-Nikes, F-75738 Paris Cedex 15, France

Tel.: + 33 (0)1 53 69 76 05

Fax: +33 (0)1 53 69 75 60

Email: ecsl@esa.int

Name:.....

Firm/University/Other:.....

Address:.....

.....

Phone:.....

Fax:

E-mail:.....

I hereby apply for new/renewed membership as:

- Student
- Other individual member
- Corporate member

This form must be accompanied by the payment of the following membership fees:

- Students: 20 euros
- Other individual members: 40 euros
- Corporate members: 200 euros

I enclose my payment/receipt of:

- Bank check made out to ESA/ECSL
 - Bank transfer to Barclays Bank, Agence Secur, compte 01484830189, RIB 96, Guichet 62019, Code Banque 30588, Att. ESA/ECSL
- IBAN: FR76 3058 8620 1901 4848 3018 996 BIC: BARCFRPP

I accept the principles contained in the ECSL Charter of 12 May as subsequently amended by the General Meetings of the ECSL Members.

Date: _____

Signature: _____

Legal and Ethical Framework for Astronauts in Space Sojourns

To develop a broad view and multidisciplinary discussion on astronauts' lives in outer space, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the European Space Agency Legal Department, the Institut du Droit de l'Espace et des Télécommunications (IDEST) of the Faculty Jean Monnet (University of Paris XI), and the European Centre for Space Law of the European Space Agency (ECSL-ESA), organised a conference on the "Legal and Ethical Framework for Astronauts in Space Sojourns". The conference took place at the UNESCO Headquarters in Paris, on 29 October 2005.

The main objective of the symposium was to provide legal and ethical experts with a common ground for discussion and to focus the latter on the real needs of astronauts, as human beings and as persons carrying rights and obligations. Once the five main discussion topics (see insert) were identified, speakers, over the last ten months, engaged in an intense and fruitful exchange of information and views. The discussion exercises allowed the presented papers to be intrinsically linked, as a natural development from one another, and centred on astronauts and on their role.

Mr. J.J. Dordain, ESA Director General; Mr. M.N. Barbosa, UNESCO Deputy Secretary General, IAF President, and Prof. J.-P. Faugère, Dean of the Faculty Jean Monnet, University of Paris, welcomed the speakers and the audience.

The morning and afternoon sessions (chaired respectively by Prof. T. Have, Director, Division of Ethics of Science and Technology of UNESCO and Mr. M. Tognini, European Astronauts Centre) addressed questions such as the definition of "astronaut" according to the UN treaties and to its perspective evolution in relation to the growth of space missions; the protection of astronauts' image and privacy; the implications of far-reaching governmental projects of solar system exploration for the astronauts; the preparation (technical and physical) for a space mission; the actual life conditions and dangers on a spacecraft; and the fast growing involvement of private entities in the outer space (e.g. space tourism).

The astronaut Mr. P. Duque described his personal experiences in outer space and showed a video covering his "sojourn" aboard the International Space Station (ISS), which was extremely appreciated by the audience.

The conference was well attended by representatives of ESA Member States, UNESCO Delegations, national space agencies, international organisations, ECSL members and university students, all of whom raised challenging questions (e.g. liability, astronauts' code of conduct) and positively interacted with the speakers.

Mr. A.A. Abiodun, UNCOPUOS Chairman, acting as final Rapporteur, drew the conclusions of the events and highlighted the major points touched upon during the day.

The conference was a success and the organisers were pleased by the results and the positive feedback received; discussions are therefore already under way to organise a follow-up event in 2005 and to possibly make this joint effort an annual, fixed rendez-vous.

The proceedings will be edited and published in the coming months (possibly February 2005; for further information, contact: alberto.marchini@esa.int).

Alberto Marchini

5 Main Discussion Topics

Status of astronauts: Prospective: Prof. P. Achilleas, IDEST - University of Paris XI; *Ethical perspective:* Dr. M. Ms Konrad, Department of Social Anthropology, University of Cambridge

General principles of law governing persons: *Legal Perspective:* Prof. A. Lepage, IDEST-University of Paris XI; *Ethical Perspective:* Mr. J. Arnould, CNES

Life in outer space: an astronaut's experience: Mr. P. Duque, ESA/EAC, *Legal Considerations:* Prof. J.F. de Faramiñán, University of Jaen, Prof. G. Catalano Sgrosso, University "La Sapienza" of Rome

Criminal conduct and other behaviours onboard space devices: *Legal Perspective:* Mr. A. Farand, ESA legal Department; *Ethical Perspective:* Prof. R. Redfield, Department of Anthropology at University of North Carolina

Liability and insurance coverage: *Legal Perspective:* Mr. G. de Dinechin, Executive Vice President, International Space Brokers; *Ethical Perspective:* Mr. J. Tort, Division of Ethics of Science and Technology of UNESCO



ECSL Website/Legal Database

(<http://www.esa.int/SPECIALS/ECSL/>)

The “ECSL legal database” shall constitute a basic tool for the promotion of space law and its knowledge at European and non-European level, open to professionals, practitioners and students coming from different fields. It should also facilitate the work of Foreign Ministries and other Ministries when preparing the debates at COPUOS.

Its functioning will mainly be based on links to other legal databases created by universities & research centers, international (OOSA) and regional organisations, National Space Agencies. Its particularity (and distinctive sign) will be to offer direct access to fundamental space law texts, and a selected bibliography by topic (offering, when possible, the opportunity to download material directly from the site).

Through this tool, the objectives are directed to familiarise the user with space law, and offer results and achievements coming from space law conferences and forums that are held world wide. We also intend to promote the work carried out by National Points of Contacts (NPOCs), space law institutes, universities, research centres, COPUOS, UNESCO and other organisations and institutions, as well as the National Space Agencies. The final result should be a network between all institutions, educational centers and research facilities related to space law.

ECSL Legal Database



The ECSL would like to take advantage of this opportunity to express all its Members Best Wishes for the coming festivities and Happy New Year.

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