# **International Academy of Astronautics**

# **Commission V Meeting Minutes**

## Paris, France Wednesday 26 March 2008

#### **Attendance**:

Kai-Uwe Schrogl, Chairman Sergio Camacho, Vice-Chairman

Participants: Fernand Alby, Gerard Brachet, Sridhara Murthi, Marius Piso, Serge Plattard, Nicola Rohner, Bernhard Schmidt-Tedd, Mathias Spude, Sergey Teselkin. The Commission V Secretary, Corinne Jorgenson, could not attend the meeting, and Nicola Rohner has been asked and agreed to assume the Secretary role for this meeting.

#### 1. Welcome

By Kai-Uwe Schrogl; short introduction of the participants. Further items in agenda added: 5) Plenary Events and 7a) Report CLIODN.

#### 2. Review IAC 2007 Hyderabad

Good turnout from symposium; good output; quality of papers good with a few less substantive.

#### 3. Status of Symposium E3 for IAC 2008 Glasgow

- Session 1 (New Developments in National Space Policies and Programmes): 16 abstracts; good global coverage and interesting topics raised.
- Session 2 (Space Policies and Programmes of International Organizations): 13 abstracts; areas dealt with are EU-space policy, space traffic management, UN, NGOs.
- Session 3 (Assessing Public-Private Partnerships in Space Projects): 14 abstracts: >10 good quality; Euroconsult had been asked to provide invited papers.
- Session 4 (Policy and Regulations Questions in Protection of Environment of Celestial Bodies): 6 abstracts (maybe the invitation was not clear that it can be more than presentation of the study); Session can be used as workgroup with much discussion
- Session 5 (Scientific-Legal Round Table): Paper satellites- Problems of Policy, Regulation and Economics, invited papers only.

Open question: Should Commission V implement a more interactive approach to the presentation of papers, e.g. three round tables, for instance, 5 speakers each? Would another way to conduct sessions be appropriate? The proposal of grouping 5 papers

into panels of one hour each was discussed. We already advertised that papers would be presented in the "linear" format in Glasgow, so for this year we keep this format. It was agreed to present the idea to the IPC and if approved, we could try the new format in Daejeon. [Note: The Chair presented the idea to the SAC meeting, so at Glasgow, the Commission should decide on a procedure.]

The Commission was informed by Fernand Alby that the status of preparations for the Space Debris Symposium at Glasgow was the following.

Symposium on Space Debris

Session 1: 25 abstracts; 9 papers should be chosen

Session 2: 20 abstracts Session 3: 11 abstracts

Session 4 (Mitigation and Standards): 15 abstracts

For interactive session only 2 papers

Gerard Brachet: In addition to the panel of Heads of Agency of emerging space countries, who will participate in session on conclusions and recommendations of the UN/IAF workshop, it seems that his proposal to include a Panel of Heads of Agency of emerging space countries will be approved by the IPC as a Plenary event for the IAC 2008.

Chairpersons and Rapporteurs E3. Symposium on Space Policy, Regulations and Economics at IAC 2008 Glasgow

#### Coordinators:

Kai-Uwe Schrogl, ESPI, Austria, kai-uwe.schrogl@espi.or.at Sergio Camacho, CRECTEALC, Mexico, sergio.camacho9@inaoep.mx

E3.1 New developments in national space policies and programmes Chairs: Pierre Molette, France, pierre.molette@centraliens.net

Janusz Zielinski, Polish Academy of Sciences, Poland,

jbz@cbk.waw.pl

Rapporteur: Klaus Becher, Knowledge and Analysis LLP, UK, becher@eusec.org

E3.2 Space policies and programmes of international organizations

Chairs: Sergio Camacho, CRECTEALC, Mexico,

sergio.camacho9@inaoep.mx

Colin Hicks, EURISY, UK, colin.hicks@eurisy.org

Rapporteur: Wolfgang Rathgeber, ESPI, Austria, wolfgang.rathgeber@espi.or.at

E3.3 Assessing Public-Private-Partnerships for space projects

Chairs: Gerard Brachet, sicitur, France, sicitur@wanadoo.fr

Motoko Uchitomi, JAXA, Japan, uchitomi.motoko@jaxa.jp

Rapporteur: Anna Burzykowska, King's College London, UK,

aburzykowska@yahoo.com

E3.4 Policy and regulations questions in the protection of the environment of celestial bodies

Chairs: Mahulena Hofmann, University of Giessen/University of Prague,

Czech Republic, mahulena.hofmann@recht.uni-giessen.de Petra Rettberg, DLR, Germany, petra.rettberg@dlr.de

Rapporteur: Marc Haese, ESA-ESTEC, The Netherlands, marc.haese@esa.int

E3.5 Scientific-Legal Roundtable: "Paper Satellites" - Problems of policy, regulation

and economics (invited papers only)

Chairs: Lubos Perek, University of Prague, Czech Republic, perek@ig.cas.cz

Corinne M. Jorgensen, Advancing Space Cosulting Group, USA,

cmj@advancingspace.com

Rapporteur: Nicola Rohner, DLR, Germany, nicola.rohner@dlr.de

#### 4. Preparation of Symposium E3 for IAC 2009 Daejeon

The Chairman presented the outline of the 2009 programme.

E3. 22nd IAA Symposium on Space Policy, Regulations and Economics

Coordinators: Kai-Uwe Schrogl, ESPI, Austria, <u>kai-uwe.schrogl@espi.or.at</u>

Sergio Camacho, Mexico, <a href="mailto:sergio.camacho@inaoep.mx">sergio.camacho@inaoep.mx</a>

E3.1 New developments in national space policies and programmes

Chairs: Gilberto Camara, INPE, Brazil, <u>gilberto@dpi.inpe.br</u>

Nicolas Peter, ESPI, Austria, nicolas.peter@espi.or.at

Rapporteur: Deganit Paikowski, Tel Aviv University, <a href="deganit.paik@gmail.com">deganit.paik@gmail.com</a>

E3.2 Space policies and programmes of international organizations with particular regard to the participation of developing countries

Chairs: Mahdi Kartasasmita, LAPAN, Indonesia, kartasasmita@lapan.go.id

Sylvia Kainz-Huber, EC, Europe, sylvia.kainz-huber@ec.europa.eu

Rapporteur: Werner Balogh, UNOOSA, Austria, werner.balogh@unvienna.org

E3.3 Launcher Policies and Regulations

Chairs: Henry Hertzfeld, GWU, USA, hrh@gwu.edu

Corinne Jorgenson, Advancing Space Consulting Group,

cmj@advancingspace.com

Rapporteur: Agnieszka Lucaszczyk, SGAC, Austria,

sgac1.officer@spacegeneration.org

E3.4 International policy and economic aspects of space applications

Chairs: Chin-Young Hwang, KARI, Korea, <u>cyhwang@kari.re.kr</u>

Geraldine Naja, ESA, Europe, geraldine.naja@esa.int

Rapporteur: Pierre Lionnet, Eurospace, France, pierre.lionnet@europsace.org

E3.5 23rd IAA/IISL Scientific-Legal Roundtable: Assessing Commercial Human

Spaceflight (Invited Papers only)

Chairs: Christophe Bonnal, CNES, France, <a href="mailto:christophe.bonnal@cnes.fr">christophe.bonnal@cnes.fr</a>

William Pomerantz, X-Prize Foundation, william@xprize.org

Rapporteur: Nicola Rohner, DLR, Germany, nicola.rohner@dlr.de

#### 5. Plenary events

Sridhara Murthi, Sergey Teselkin: Possible topic for 2009: Mobile telecommunication issues in the Asia-Pacific region (including issues of launch services), to be decided upon in Glasgow, on the basis of a formal draft proposal by Sridhara Murthi.

It was agreed to carry out further brainstorming among all members and guests at the next meeting (in Glasgow) to agree on other proposals for Plenary Events.

#### **6. Status of Commission V Study Groups**

Since no representatives of the study groups on planetary protection and launcher policies were present, the Chairman reported on the status:

The studies on launcher policies and planetary protection, to his knowledge, seem to be on track, and will be "tested" at the respective sessions of the IAC in 2008. [The Space Policy and Environmental Protection of the Moon Study Group has not materialized and the Commission should not take initiatives until such a time as the interested members of the Study Group make a presentation to the Commission and, if approved, the topic would de presented to the SAC].

Fernand Alby reported that the content of study Space Debris (2009/2010) is defined and the Group is now in the drafting period; the first draft will be presented at the Glasgow meeting.

It was discussed that this study could be the topic for the 2010 Scientific-Legal Roundtable.

Short discussion on parallel studies on the topic of NEOs by Commission V and Commission III. Ivan Bekey has now prepared a draft study. At this time Commission V will not be active in NEO.

### 7. Report on the new approach of Acta Astronautica

Rupert Gerzer, as Chairman of the editorial board, has been very active and constructive; this has resulted in short publishing times. Task of the Commissions: to encourage people to submit articles. In Glasgow all conference papers of our Symposium will be screened; 4 papers might be chosen and proposed for publication. Proposal for process of selecting papers: Chairs and rapporteurs of the Sessions should select one or two best papers for submission to Acta Astronautica. The selection process will be flexible (maybe no papers from one session but three from another). Chair of the Commission and members would review the selection by Chairs and rapporteurs. Chairs and rapporteurs will act as reviewers in the Acta publishing process.

#### **8. Report on CLIODN**

(IAF Committee on Liason with International Organizations and Developing Nations) Gerard Brachet reported being the new Chairman of CLIODN, following many years of successful Chairmanship by Prof. U.R. Rao. G. Brachet is making proposals to further strengthen the participation from developing countries (Latin America, Africa as well as Asia) in the UN/IAF Workshops and in IAF activities, particularly during the annual IAC.

#### 9. New initiatives by Commission V

A brainstorming was held on new possible study topics; the following proposals were made:

- S. Teselkin: Role of bilateral cooperation agreements as a 'practical guide or examples of soft law regulations' in international legislation and its impact on national space policies"
- S. Murthi/M. Piso: "Safeguarding of space assets"; alternative title: "Space systems as critical infrastructures"
- Proposal for IAA/IISL Scientific-Legal Round Table 2010: Space Debris A further brainstorming will be conducted at the Glasgow meeting of the Commission with the aim to launch one or two studies at that time.

# 10. Any other business

- Gerard Brachet reported that the IAA strategy outreach committee ceased to be active.

IAC 2009 Daejeon

Schrogl, 3 March 2008

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#### E3. 22nd IAA Symposium on Space Policy, Regulations and Economics

This symposium, organized by the International Academy of Astronautics, will provide a systematic overview of the current trends in space policy, regulation and economics. It covers national as well as multilateral space policies and plans, launcher policies and regulations, which are currently being researched under an IAA Cosmic Study project that also touched upon current policy and economic aspects of space applications. The symposium also integrates findings of the IAA/IISL Scientific-Legal Roundtable, which deals with an inter-disciplinary assessment of commercial human spaceflight.

#### Coordinators:

Kai-Uwe Schrogl, ESPI, Austria, <u>kai-uwe.schrogl@espi.or.at</u> Sergio Camacho, Mexico, <u>sergio.camacho@inaoep.mx</u>

#### E3.1 New developments in national space policies and programmes

This session will provide a forum for presenting current space policies and programmes of space-faring countries.

Chairs: Gilberto Camara, INPE, Brazil, <a href="mailto:gilberto@dpi.inpe.br">gilberto@dpi.inpe.br</a>

Nicolas Peter, ESPI, Austria, nicolas.peter@espi.or.at

Rapporteur: Deganit Paikowski, Tel Aviv University, <a href="deganit.paik@gmail.com">deganit.paik@gmail.com</a>

# E3.2 Space policies and programmes of international organizations with particular regard to the participation of developing countries

This session will provide a forum for presenting current space policies and programmes of international organizations with space activities. It will provide a special but not exclusive focus on the participation of developing countries

Chairs: Mahdi Kartasasmita, LAPAN, Indonesia, kartasasmita@lapan.go.id

Sylvia Kainz-Huber, EC, Europe, sylvia.kainz-huber@ec.europa.eu

Rapporteur: Werner Balogh, UNOOSA, Austria, werner.balogh@unvienna.org

### E3.3 Launcher Policies and Regulations

This session will provide a forum to discuss the latest developments in the launcher sector. It will include the presentation of the intermediate results of an ongoing IAA study in this area.

Chairs: Henry Hertzfeld, GWU, USA, hrh@gwu.edu

Corinne Jorgenson, Advancing Space Consulting Group,

cmj@advancingspace.com

Rapporteur: Agnieszka Lucaszczyk, SGAC, Austria,

sgac1@officer@spacegeneration.org

#### E3.4 International policy and economic aspects of space applications

This session shall take stock of the recent developments in the space applications sector with regard to policy questions and economic impacts. Such aspects will be covered in the areas of telecommunications, navigation and Earth observation as well as other application areas.

Chairs: Chin-Young Hwang, KARI, Korea, <a href="mailto:cyhwang@kari.re.kr">cyhwang@kari.re.kr</a>

Geraldine Naja, ESA, Europe, geraldine.naja@esa.int

Rapporteur: Pierre Lionnet, Eurospace, France, pierre.lionnet@europsace.org

# E3.5 23rd IAA/IISL Scientific-Legal Roundtable: Assessing Commercial Human Spaceflight (Invited Papers only)

With commercial human spaceflight on the rise, this session will look into the issue from the policy, economic and regulatory perspectives in order to shape a comprehensive picture of the state and the prospects of this area. The Roundtable, organized by the IAA-IISL Scientific-Legal Liaison Committee, will comprise invited papers by the leading experts only and is aimed at conducting an inter-disciplinary debate. It will be opened by the Presidents of IAA and IISL stressing the outstanding character of this event.

Chairs: Christophe Bonnal, CNES, France, <a href="mailto:christophe.bonnal@cnes.fr">christophe.bonnal@cnes.fr</a>

William Pomerantz, X-Prize Foundation, william@xprize.org

Rapporteur: Nicola Rohner, DLR, Germany, nicola.rohner@dlr.de

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