

## IPAC report 2010

The focus of IPAC's work in 2010 was directed to

1. React on request coming from the ISPRS Council, and additionally
2. Initiate and continue contacts and collaboration with further societies or institutions (IAA, ESPI, RAATs), dealing with matters overlapping with ISPRS
3. Prepare conferences within ISPRS and together with other societies/institutions,
4. Participate in conferences.

### 1. Activities according to ISPRS Council requests

**1.1** ISPRS representation at the 46<sup>th</sup> session of the Scientific and Technical Subcommittee of UN COPUOS in Vienna (Feb. 2009).

Continuation of the information about ISPRS activities and invitation to the ISPRS Centenary on July 4, 2010, in Vienna

**1.2** ISPRS representation at the 38. COSPAR Council Meeting in Bremen (July 2010).

At this meeting, the COSPAR Vice President, Prof. Ed Stone (USA), proposed to organise additional "Conferences" in odd years between the biannual General Assemblies (even years). For these events COSPAR will try to team up with other relevant organisations like ISPRS. This proposal is still in discussion.

**1.3** Collaboration discussions at the 61. IAC in Prague (Sept. 2010).

Following a cooperation offer coming from the ISPRS Council, IAA SG, Jean-Michel Contant, and IAA VP Scientific Activities, Stanislav Konyukhov, agreed to organise joint ISPRS/IAA sessions or even separate IAA sessions at the ISPRS Congress in Melbourne.

### 2. Initiation and continuation of contacts and collaboration

The IPAC initiated meetings and activities with different societies and institutions (IAA, ESPI, RAATs). The goal of those joint activities is to improve the quality of the work jointly done without increasing the number of conferences and studies.

#### 2.1 IAA (International Academy of Astronautics)

- Participation of ISPRS in the IAA Study 4.9 "International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-caused Disasters",
- Invited IAA paper by the IAA-SG at the Policy-Session of the Com.8 Symposium in Kyoto
- ISPRS President is invited to be member of the IPC of the IAA Conference for Sustainable Development in the Middle East, Oct. 2011, Damascus
- Invited ISPRS paper by the IPAC Chair at the IAA/NASRDA International Symposium on the Equatorial Plane, Nov. 30 - Dec. 2, 2010, Abuja, Nigeria
- Organisation of a joint conference on "Current legal issues for satellite Earth observation".
- The results of the discussions in Prague (see item 1.3) are:  
IAA Commissions IV (Space Systems Operation and Utilisation) and V (Space Policies, Law & Economics) have been asked to act accordingly.

It turned out that IAA can and will contribute to:

- ISPRS WG I/6 session(s) dealing with small satellites. Prof. Klaus Briess, the new WG chair, will make use of the IAA Comm. IV expertise and propose related themes for joint ISPRS/IAA session(s).

- For the "Policy" Symposium of IPAC we plan to have an joint ISPRS/IAA event with 3 sessions making also use of the expertise of IAA Comm. V and further IAA academician experts. But of course, we are aware of the experiment status of this kind of Policy event (themes and structure) and the risk connected to it. In this context, IPAC makes the attached

proposal for a joint ISPRS/IAA Symposium “Actual policy issues of space borne Earth observation”.

## **2.2 ESPI (European Space Policy Institute)**

Organisation of a joint conference on “Current legal issues for satellite Earth observation”

## **2.4 RAATs (Russian Academy of Astronautics named after Tsiolkovsky)**

MoU between ISPRS and RAATs concerning collaboration at conferences and in study groups. In that context: ISPRS is contributing to the study “International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-caused Disasters”.

- Participation at the IAA/RAATs Workshop on Monitoring Global Phenomena and Man-Made Disasters, July 2010, Riga, Latvia



The 2nd Vice President of ISPRS, Ammatzia Peled (left), and the Chair of IPAC, Rainer Sandau (middle), have been awarded the "Tsiolkowski Medal of Honour" by the Russian Academy of Cosmonautics named after Tsiolkowski.

## **3. Conference preparations**

**3.1** “Policy” sessions at Comm. VIII Symposium, Aug 2010, Kyoto

**3.2** Joint ISPRS/ESPI/IAA/IISL Conference on “Current legal issues for satellite Earth observation”, Vienna, April 8/9 2010

## **4. Conference participation of IPAC members**

**4.1** Map Middle East 2010 - International Symposium on Space Policy and Coordination Framework, March 23, 2010, Abu Dhabi

Invited paper:

Gunter Schreier, Bernhard Schmidt-Tedd, Rainer Sandau: Fundamentals of Earth Observation Policy: Examples for German and European Missions

**4.2** Joint ISPRS/ESPI/IAA/IISL Conference on “Current legal issues for satellite Earth observation”, Vienna, April 8/9 2010

Together with ISPRS, IAA and IISL, ESPI organised a two-day conference on "Current legal issues for satellite Earth observation" at its premises in Vienna. The focus was put on treaty monitoring and

privacy conflicts. [http://www.espi.or.at/index.php?option=com\\_content&task=view&id=479&Itemid=37](http://www.espi.or.at/index.php?option=com_content&task=view&id=479&Itemid=37)

### **IPAC contributions:**

- Conf. co-chair of the ISPRS/ESPI/IAA/IISL Conference
- Session chair at the ISPRS/ESPI/IAA/IISL Conference
- 2 co-moderators at the ISPRS/ESPI/IAA/IISL Conference Roundtable
- 3 Invited papers:
  - C. Cho: Privacy conflicts from high resolution imaging – Overview on legal issues.
  - G. Schreier: What's in GMES for treaty monitoring and law enforcement.
  - *Frans von der Dunk: The European Convention on Human Rights and EC law - 'Two European legal approaches to privacy, as relevant to high-resolution imaging*



Roundtable at the conference (from left): Rainer Sandau, Gunter Schreier, Ray Purdy, George Cho, Tanja Masson-Zwaan and Kai-Uwe Schrogl

The Conference Report:

### **Current Legal Issues for Satellite Earth Observation: Treaty Verification and Law Enforcement Through Satellite Observation, Privacy Conflicts from High Resolution Imaging**

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is also available:

[http://www.espi.or.at/images/stories/dokumente/studies/espi%20report%2025%20\\_online%20version.pdf](http://www.espi.or.at/images/stories/dokumente/studies/espi%20report%2025%20_online%20version.pdf)

### **4.3 ISPRS Com.8 Symposium in Kyoto, Aug. 9-13**

Chairs of the Policy Session organised by IPAC: Irmgard Niemeyer & Frans von der Dunk

3 IPAC papers:

- Jeng-Shing Chern: Technical Considerations in Real Time Global Earth Rescue System of Systems (GERSS)
- Frans von der Dunk: Current Legal Issues for Satellite Earth Observation in Europe - A Report from Vienna
- Irmgard Niemeyer: Supporting Non-Proliferation Treaties and Arms Control by Remote Sensing and Geoinformation Technologies

Two more papers were contributed by ISPRS Vice President, Ian Dowman, and IAA Secretary General, Jean-Michel Contant.



The IPAC delegates to Comm. VIII Symposium in Kyoto looked relaxed after the successful Policy session (from left: Frans von der Dunk, Irmgard Niemeyer, Rainer Sandau)

#### 4.4 IAA/NASRDA International Symposium on the Equatorial Plane, Nov. 30 - Dec. 2, 2010, Abuja, Nigeria

Invited paper:

Rainer Sandau: Systematic approach to design small satellites for specific Earth observation tasks

#### 4.5 4th Autumn Conference held at ESPI, Vienna, Sept. 8-9, 2010

[http://www.espi.or.at/images/stories/dokumente/leaflet/4th\\_ESPI\\_Autumn\\_Conference\\_Programme\\_080910.pdf](http://www.espi.or.at/images/stories/dokumente/leaflet/4th_ESPI_Autumn_Conference_Programme_080910.pdf)

Invited paper:

Rainer Sandau: Implications of new trends in micro-satellite developments



Contributors to the Yearbook on Space Policy 2009/2010 from left: Spyros Pagkratis (ESPI), Rainer Sandau (ISPRS), Ian Pryke (George Mason University, Washington DC), Lesley-Jane Smith (Leuphana University), Christophe Venet (University of Tübingen), Blandina Baranes (ESPI), Michael Sheehan (University of Swansea), Simonetta Cheli (ESA), Ray Harris (University College, London), Heike Wieland (GSA) and Kai-Uwe Schrogl (ESPI)

Attachment

Proposal for a joint ISPRS/IAA Symposium  
**Actual policy issues of space borne Earth observation**  
in Melbourne, 2012

- 1. General legal issues concerning space law and EO satellite data**
  - Liability aspects of space systems: theory and practice
  - International law obligations on provision of information and EO data
  - Public access to electronic data
  - intellectual property rights issues in the context of EO data
  - privacy and very high resolution EO data
  
- 2. Treaty monitoring and law enforcement by means of spaceborne remote sensing**
  - Importance and practice of disarmament treaties monitoring
  - National law and the use of satellites for monitoring
  - Environmental treaties and climate change agreements/protocols verification
  - Maritime surveillance from space (ship traffic, discharge oil, illegal fishery, illegal immigration, trafficking and piracy...)
  
- 3. The value of evidence of EO satellite data in court cases: theory and practice**
  - State of the art in EO satellite data products (reliability, audit trail...)
  - The use of evidence in international court cases
  - The use of evidence in common law proceedings (judge and attorney perspectives...)
  - The use of evidence in civil law proceedings (judge and attorney perspectives...)

**Comments:**

The basic idea is to have volunteer session co-chairs from both parties who are interested and able to organise sessions to the themes (which are hopefully of sufficient good general interest to attract paper proposals for Melbourne) and who are also able to solicit expert's papers to ensure high quality sessions. We plan to organise 3 sessions but we are aware that this kind of policy symposium is new within ISPRS resulting in an uncertainty in terms of acceptance and responses. We have already some names for the co-chairs positions (tentatively, depending on travel funding in 2012) and would provide them in case of necessity.