

Summary of the Second Meeting of the IAG EC 2015-2019

Place: San Francisco, CA, USA, Hotel Marriott Marquis, 780 Mission St., Room Pacific C

Time: Saturday, December 12, 2015, 09:00 – 18:00

Attendees (voting): H. Schuh (IAG President), Z. Altamimi (Vice President), H. Drewes (Secretary General, via Skype), G. Blewitt (President of Commission 1), R. Pail (President of Commission 2), M. Hashimoto (President of Commission 3), M. Santos (President of Commission 4), P. Novák (President of ICC on Theory), H. Kutterer (Chair of GGOS), R. Barzaghi, R. Neilan, A. Nothnagel (Representatives of the Services), L. Combrinck (Member at Large)

Regrets: C. Rizos (Immediate Past President), J. Adam (President of the COB), M.C. Pacino (Member at Large)

Attendees (non-voting): F. Kuglitsch (Assistant Secretary General)

Guests: J. Ceva (Moderator of the IAG Strategy Process), J. Freymueller (Editor in Chief of the IAG Symposia Series, G. Johnston (Chair of the IGS Governing Board)

Summary of Agenda Items

1. Welcome and adoption of agenda

The 2nd IAG EC Meeting in the term 2015-2019 took place on the occasion of the AGU Fall Meeting. *H. Schuh*, the President of the IAG, welcomed the members of the EC (13 out of 16 voting members, 1 non-voting member, 3 guests). The agenda was distributed previously by email and was unanimously adopted. *H. Schuh* introduced the new Assistant Secretary General, *F. Kuglitsch*, and highlighted the importance of discussing the IAG strategy process together with the guest and moderator *J. Ceva* during this meeting. On suggestion of *Z. Altamimi*, *H. Schuh* invited *G. Johnston* to join the meeting after the coffee break at 11:00 for discussing agenda point 10 “*Position Paper on the UN Global Geodetic Reference Frame*”. The EC Members approved the minutes of the first EC Meeting in Prague, July 2, 2015.

2. Structure 2015-2019 of the Commissions 2, 3 and 4

R. Pail gave the presentation about Commission 2. It will keep 6 sub-commissions: SC 2.1 *Gravimetry and Gravity Networks* (Chair *L. Vitushkin*) will remain as before. SC 2.2 is now called *Methodology for Geoid and Height Determination* (Chair *J. Agren*) and SC 2.3 is now called *Satellite Gravity Missions* (Chair *A. Jäggi*). SC 2.4 *Regional Geoid Determination* (Chair *M.C. Pacino*) and SC 2.5 *Satellite Altimetry* (Chair *X. Deng*) keep their names; and SC 2.6 is now called *Gravity and Mass Transport in the Earth System* (Chair *J. Kusche*). *R. Pail* also presented the new Working Groups “*Relativistic Geodesy: First steps towards a new geodetic technique*” and “*Gravity for Climate Model Validation*”. The GGHS-2016, a joint meeting with IGFS, will be organized in Thessaloniki, Greece, 19-23 September 2016. *H. Schuh* explained that working groups have a life time of 4 years, working or study groups have a maximum of 20 members, and the Commission Steering Committee 10-12 members; e.g. sub-commission chairs and others. Sub-commissions have no steering committees.

M. Hashimoto gave the presentation of Commission 3. He reported about its objectives, structure, and activities. There are 5 sub-commissions: SC 3.1 *Earth Tides and Geodynamics* (Chair *J. Bogusz*), SC 3.2 *Crustal Deformation* (Chair *Z.-K. Shen*), SC 3.3 *Earth Rotation and Geophysical Fluids* (Chair *J. Chen*), SC 3.4 *Cryospheric Deformation* (Chair *S. Abbas Khan*), and SC 3.5 *Tectonics and Earthquake Geodesy* (Chair *H. Ozener*). *H. Drewes* mentioned that

there can be only up to 2 Members at Large in the Commission's Steering Committee but up to 3 Representatives of IAG services. *H. Schuh* clarified that sub-commissions do not have members but any interested scientist can contribute and become involved in study or working groups. He mentioned that there is also a GGOS focus area which is chaired by *T. Schöne* that should be closely linked to the Joint Working Group 3.2.

M. Santos gave the presentation on Commission 4. There will be only 4 instead of 6 sub-commissions: SC 4.1 *Emerging Positioning Technologies and GNSS Augmentation* (Chair *V. Gikas*), SC 4.2 *Geo-Spatial Mapping and Geodetic Engineering* (Chair *J. W. Wang*), SC 4.3 *Atmosphere Remote Sensing* (Chair *M. Schmidt*), and SC 4.4 *Multi-Constellation GNSS* (Chair *P. Wielgosz*). *H. Drewes* noted that there should be no co-chairs as in this case nobody feels responsible. Also, vice-chairs should be avoided. *H. Schuh* suggested nominating more young people as chairs to the working and study groups. Commission 4 will have a symposium in 2016 in Wroclaw, Poland. *H. Drewes* clarified that meetings can get support from IAG if one component or sub-component of IAG is supporting it and if at least one member of the SOC gets approved by the EC.

3. Structure of the Inter-Commission Committee on Theory and Appointment of the ICCT Vice President

P. Novák, gave the presentation on the structure and activities of ICCT. He mentioned that the ICCT past president, *N. Sneeuw*, will continue being involved in ICCT activities. There are 12 study groups, all of them jointly organized with one or more commissions. The setup of 2 more study groups (*New generation of terrestrial reference frames* and *New realization of geodetic reference system*) is under consideration. He highlighted the involvement of early-career scientists in the study groups. *H. Drewes* noted that the ICCT study groups should be also mentioned with the names of their chairs in the Commission structures referring to ICCT for further information. They have to report to ICCT. The EC Members recommended organizing the Hotine-Marussi Symposium in 2018. *P. Novák* proposed *M. Crespi* to become the next ICCT Vice-President. The EC members unanimously approved it.

4. Programmes 2015-2019 of the Services

R. Barzaghi gave the presentation about the International Gravity Field Service (IGFS): Bureau Gravimetric International (BGI), International Service for the Geoid (ISG), International Center for Global Earth Models (ICGEM), International DEM Service (IDEMS), International Geodynamics and Earth Tides Service (IGETS). He mentioned that soon there will be a call for a new IGFS Central Bureau which should start its activities on 1 April 2016. Also, he reported that *J.-P. Boy* is the interim chair of IGETS; the interim IGETS website is <http://www.eas.slu.edu/GGP/ggphome.html>. The renewal of IDEMS is still under discussion. *H. Schuh* and *H. Kutterer* mentioned that collaborating with a company (ESRI) is principally OK as long as free access is guaranteed and the commercial interest is clarified.

R. Neilan gave an overview about the International GNSS Service (IGS) and introduced *G. Johnston* as the new IGS Chair. She mentioned that ILRS has a new SLR station in Brazil funded by Russia. At the ICG Meeting in Boulder there was the idea that IGS starts a pilot project to do GNSS Monitoring Assessment Validation. She also mentioned that the IGS Analysis Center Coordinator is moving from the USA to Australia because the US National Geodetic Survey cannot support it anymore. *G. Johnston* will propose *T. Herring* as the new coordinator. Also, there will be an IGS workshop in Sydney, Australia from 8-12 February 2016, and she will make sure that the IGS report will be finished by then.

A. *Nothnagel* gave a presentation about the International Earth Rotation and Reference Systems Service (IERS), the Bureau International des Poids et Mesures (BIPM), the International VLBI Service for Geodesy and Astrometry (IVS), and the Permanent Service for Mean Sea Level (PSMSL).

5. Structure of GGOS

H. Kutterer mentioned that the GGOS website (www.ggos.org) hosted by BKG, is currently updated and will be relaunched in early 2016, that GGOS is looking for a host and director of the GGOS Coordinating Office, and that the GGOS Science Panel Chair needs to be elected. He explained that the GGOS Consortium is the collective voice for all GGOS matters and meets annually (GGOS Days), and that the GGOS Coordinating Board is the decision making body of GGOS which meets twice a year. Also, he mentioned that the GGOS Executive Committee still needs to be approved by the members of the Coordinating Board. The GGOS Science Panel, a multi-disciplinary advisory board that provides scientific support and guidance to the GGOS steering and coordination entities is almost complete. He mentioned that there are proposals for 2 new GGOS Working Groups: *Strategy for the Realization of the International Height Reference System (IHR)*, Chair *L. Sanchez* and *New Technologies and Multidisciplinary Contribution to Disaster Monitoring and Management* (Chair *J. Doukas*).

6. Report of the Communication and Outreach Branch (COB)

As the COB President *J. Adam* could not attend the meeting, *H. Schuh* summarized the report and concluded that the COB needs to get news/input for the IAG website and the IAG newsletter regularly. He requested all commissions and services to contribute once per year, and also to report about all symposia. Every month, one report (up to one page) by a commission or service should become available and submitted to GIM International and the IAG Newsletter. He further mentioned that the COB will submit the reports to GIM International. *C. Rizos* will still be acting as the editor of the text, if required. The scheduling of the monthly report submissions should be mainly organized by the COB.

7. Report from developing countries

L. Combrinck, gave the presentation about the African VLBI Network (AVN) Project and other activities in Africa. *M.C. Pacino* could not attend the meeting to give a presentation about the activities in South America. *H. Schuh* noted that there is no Member at Large who can report about the activities in Asia and suggested *M. Hashimoto* to report about this topic at future EC meetings.

8. IAG Representatives to IUGG Commissions and Working Group

H. Schuh presented the names of IAG Representatives to Scientific Bodies (see http://iag.dgfi.tum.de/fileadmin/IAG-docs/IAG_Representatives_2015.pdf). The EC members approved *R. Barzaghi* as representative to ICGEM, *R. Pail* as representative to ISG, *J. Hagedorn* as representative to SEDI, *H. Schuh* for UN-GGIM, *S. Rozsa* for the IUGG Outreach Committee, *B. Heck* for the IUGG Capacity Building and Education Committee, *H. Schuh* for the IUGG Honours and Recognition Committee, *J. Freymueller* for the IUGG Statutes and Bylaws Committee, and to ask *L. Hothem* or *M. Craymer* to become representative to ISO.

9. IAG Strategy discussion

H. Schuh invited *J. Ceva* starting the IAG Strategy discussion. *J. Ceva* mentioned the importance of deciding how IAG would like to proceed, either with (i) the development of a strategic plan, (ii) addressing different issues without doing a formal strategic plan, or (iii) postponing the strategic planning process. He presented 8 questions that should be answered first to begin the strategic planning process. *H. Schuh* mentioned that there are several open issues motivating him to undertake a strategic planning process. The last time IAG did a similar strategic planning exercise was about 15 years ago and since then many things in science have changed. There is a need to attract early-career scientists in IAG activities and to further strengthen IAG outreach activities (c.f. COB), especially to reach policymakers and to increase visibility of IAG and Geodesy in general. Internal relationships such as between IAG and GIAC, UN-GGIM, IERS must be clarified, and the IGFS must be strengthened by improving its structure. Further open issues, sent by *C. Rizos*, are e.g. the implementation of UN-GGRF or the International Services Assessment (ISA) which still has to be finished.

Several EC members highlighted the difficulties of attracting early-career scientists who usually are not aware what IUGG or IAG stands for because these are mostly doing science management. Anyways, there should be events for early-career scientists at IAG events but also universities and organizers of similar meetings (e.g. International Geodetic Student Meeting in Munich, 2016) should be contacted to advertise IAG. Also, they suggested to precisely defining the objectives of IAG to easily distinguish IAG from other organizations such as ISPRS or FIG. *H. Schuh* mentioned that the IAG mission statements and objectives should be written in a modern language and not simply taken from the IAG Statutes.

The EC members agreed to start the strategic planning process but to avoid any major changes in the structure of IAG. *H. Schuh* mentioned that all the EC members should be involved in the strategic planning process (incl. possible external input, e.g. *G. Beutler*). It should be presented to the public at the IAG Scientific Assembly 2017 and finalized in 2 years. The EC members decided a meeting for a 1.5 day retreat and a 0.5 day EC meeting in Potsdam, Germany, from 25-26 April 2016.

10. Position paper on the UN Global Geodetic Reference Frame

A draft position paper describing the IAG's understanding of the Global Geodetic Reference Frame (GGRF) had been submitted by an ad-hoc working group of GGOS. This paper was subject of the discussion. *G. Johnston* presented the "*Description of the Global Geodetic Reference Frame*". He summarized that the major goal is the sustainable development and not the technical details. *H. Schuh* noted that it is good to have a report as a compilation of IAG's understanding of the GGRF. But he also confirmed that some statements are contradicting each other. *H. Kutterer* agreed that the paper is a good basis for further discussion and future perspectives but a stronger focus should be put on the need of the international geodetic community to reach the goals. The EC agreed that the document requires further revision. *H. Schuh* invited the EC members sending further comments to *J. Ihde* and *R. Barzaghi* and the ad-hoc working group. The EC agreed to approve the position paper provisionally. An e-voting on the approval of the final document needs to be done.

11. Structure 2015-2019 of the Commission 1

G. Blewitt gave the presentation about Commission 1 which will have 4 Sub-commissions: SC 1.1 *Coordination of Space Techniques* (Chair *U. Hugentobler*), SC 1.2 *Global Reference*

Frames (Chair X. Collilieux), SC 1.3 *Regional Reference Frames* (Chair C. Bruyninx), and SC 1.4 *Interaction of Celestial and Terrestrial Reference Frames* (Chair Z. Malkin). He mentioned that there will be 6 Joint Working Groups. *H. Schuh* mentioned that there should be no Co-Chairs but only Vice-Chairs to give responsibility to one person and recommended making the Joint Working Group 1.3 *Definition of next generation terrestrial reference frames* a Joint Study Group. *G. Blewitt* mentioned that Commission 1 has not appointed any Representatives of Services. *H. Schuh* commented that representatives for up to 3 Services and up to 2 Members at Large (considering geographical balance) should be appointed. Also, he clarified that scientists involved as officer or member in the Associations do not have to come from a paid-up IUGG member country (except the Association President).

12. Relations with other international scientific and professional bodies

H. Schuh discussed the relations with other international, scientific and professional bodies and the IAG Representatives to Scientific Bodies (see http://iag.dgfi.tum.de/fileadmin/IAG-docs/IAG_Representatives_2015.pdf). He mentioned that the President of the IAG Commission 1 (*G. Blewitt*) is also President of the COSPAR sub-commission B2, and assigned as IUGG Liaison Officer to COSPAR.

13. Travaux 2015 and Geodesist's Handbook 2016

H. Schuh referred to the Travaux 2015 (<http://iag.dgfi.tum.de/index.php?id=329>) and mentioned that the deadline for contributions for the Handbook 2016 is on 31.01.2016. Templates are available at https://www.overleaf.com/latex/templates/journal-of-geodesy-springer-latex-template/mntwrgrpqzrw#.VmluKb_0chR.

14. Status of the Prague proceedings

J. Freymueller presented the idea of exploring the possibility of making future IAG Symposia books entirely electronic, together with IAG and Springer. *H. Kutterer* supported this idea and thinks it should be a strategic interest of IAG to get a broad readership (with possibly open access) and a higher visibility.

15. Status of the Journal of Geodesy

H. Schuh presented the status of the Journal of Geodesy, prepared by the Editor-in-chief *J. Kusche* (<http://iag.dgfi.tum.de/fileadmin/IAG-docs/Report-JoG.IAG-EC.2015.pdf>)

16. IAG/IASPEI Scientific Assembly, Kobe, Japan, 2017-07-30 to 2017-08-04

H. Schuh gave an overview about the current status of preparations for the IAG/IASPEI Assembly 2017. He mentioned that the Local Organizing Committee (LOC; chaired by *K. Heki*) is known and the Scientific Organizing Committee (SOC) should consist of both IAG and IASPEI representatives. He suggested the 4 IAG Commission Presidents, the President of ICCT, the Chair of GGOS and *R. Barzaghi* as SOC members. He further mentioned that as many as possible joint symposia between IAG and IASPEI should be organized. Possible topics (suggested by the EC to the SOC) might be earthquake monitoring, seismic modelling, potential fields for constraining 3D-Earth modelling, early warning systems (e.g. tsunamis, volcanoes), deformation, inverse problems, time series analysis, and error propagation. *M. Hashimoto* mentioned that the sessions should be fixed by May 2016, the registration and abstract submission should start by September 2016, the deadline of abstract submission

should be in February 2017, and the program should be fixed by April 2017. *Z. Altamimi* mentioned that the UN-GGIM meeting in New York might coincide with the Kobe Assembly.

17. Asia Oceania Geosciences Society meeting AOGS 2016

H. Schuh mentioned that the AOGS Meeting in Beijing from 31 July to 5 August 2016 is in conflict with the UN-GGIM Meeting but it definitely would be worth attending AOGS because there are at least 5 Geodesy sessions.

18. Report from IUGG and ICSU

F. Kuglitsch gave the presentation about the news from IUGG. He reported about the new composition of the IUGG EC and Finance Committee, changes in the IUGG structure, statistics of the IUGG General Assembly 2015 and the upcoming Scientific Assemblies of the IUGG Associations in 2017.

19. IAG Services Assessment, ISA

H. Schuh reported that during the last IAG term all Services were requested answering a questionnaire to do an overall assessment. Based on the questionnaires that were answered by (almost) all Services a first round of review was done by three experts for each Service. Then feedback was given to the Services and they were requested to respond. So far IAG has received answers from IGFS, ISG and IVS. He mentioned that IAG Past-President *C. Rizos* agreed continuing to chair the IAG Services Assessment. He further noted that this assessment is kind of a formal approval of the services which might increase their impact and visibility. *Z. Altamimi* asked for getting the questionnaire (without answers).

20. Any other business

M. Santos proposed sponsoring 2 meetings: (1) EuroCow European Calibration and Orientation Workshop, 10-12 February 2016, Lausanne, Switzerland (SOC member: *P. Wielgosz*); (2) International Conference on GNSS+ (ICG2016), 28-30 July 2016, Shanghai, China (SOC member: *V. Gikas*). The EC approved these meetings, i.e. early-career scientists may apply for IAG travel grants and the meeting organizers have to use the IAG logo. *H. Schuh* clarified that a meeting is an IAG Symposium when it is organized by 1 IAG component or 2 sub-components. Also, he mentioned that the papers should be published in a Springer volume, assuming that the number of papers is sufficient (~20). The IAG Secretary General needs to be informed about the symposia one year in advance.

21. Next IAG EC meeting

The EC decided to hold its next meeting together with the strategic planning retreat in Potsdam, Germany, 25-26 April 2016. Then it should be decided whether an EC meeting should be organized also on the occasion of the AGU Fall Meeting in December 2016.

22. Adjourn

H. Schuh thanked the participants for their contributions and closed the session at 17:50.

Respectfully submitted
F. Kuglitsch, Assistant Secretary General