



The International Cartographic Association 2011 - 2015

Report of the President

1. The mandate of the XV. General Assembly of ICA

At the 15th General Assembly of the International Cartographic Association at Paris 2011 the national delegates voted and decided on the operating and financial framework of the Association for the term 2011 to 2015.

Based on their vote the Executive Committee consisting of Georg Gartner (President), Laszlo Zentai (Secretary-General) and the Vice-Presidents Anne Ruas, Derek Clarke, Sukendra Martha, Paulo Menezes, Tim Trainor, Menno-Jan Kraak, Yaolin Liu obtained their authority.

Further, the national delegates at the General Assembly gave a mandate to a total number of 28 commissions and their nominated chairpersons:

- Commission on Art and Cartography, Chair Sébastien Caquard
- Commission on Atlases, Chair Peter Jordan
- Commission on Cartography and Children, Chair José Jesus Reyes Nunez
- Commission on Cartography in Early Warning and Crisis Management, Chair Milan Konecny
- Commission on Cognitive Visualization, Chair Sara Fabrikant
- Commission on Data Quality, Chair Xiaoyong Chen
- Commission on Digital Technologies in Cartographic Heritage, Chair Evangelos Livieratos
- Commission on Education and Training, Chair David Fraser, followed by David Fairbairn
- Commission on Generalisation and Multiple Representation, Chair Dirk Burghardt
- Commission on Geoinformation Infrastructures and Standards, Chair Antony Cooper
- Commission on Geospatial Analysis and Modelling, Chair Bin Jiang
- Commission on Geovisualization, Gennady Andrienko
- Commission on GI for Sustainability, Chair Vladimir Tikunov
- Commission on the History of Cartography, Chair Elri Liebenberg
- Commission on Map Design, Chair Kenneth Field
- Commission on Map Production and Geo-Business, Chair Philippe de Maeyer
- Commission on Map Projections, Chair Miljenko Lapaine
- Commission on Mapping from Remote Sensor Imagery, Chair Xiaojun Yang
- Commission on Maps and Graphics for Blind and Partially Sighted People, Chair Alejandra Coll
- Commission on Maps and Society, Chair Christopher Perkins
- Commission on Maps and the Internet, Chair Rex Cammack
- Commission on Mountain Cartography, Chair Karel Kriz
- Commission on Neocartography, Chair Steve Chilton
- Commission on Open Source Geospatial Technologies, Chair Suchith Anand

- Commission on Planetary Cartography, Chair Henrik Hargitai
- Commission on Theoretical Cartography, Chair Qingyun Du
- Commission on Ubiquitous Mapping, Chair Masatoshi Arikawa
- Commission on Use and User Issues, Chair Corné van Elzakker

Furthermore a joined ICA working group and IGU Commission on Toponymy was set in place from the EC right after the General Assembly, chaired by Paulo Menezes (ICA) and Cosimo Palagiano (IGU) as well as a working group on the International Map Year under the chairmanship of Bengt Rystedt.

ICA was given a budget, proposed by the Secretary-General and Treasurer of the term 2007-2011 David Fairbairn, and meant as a financial framework, by the vote of the delegates (refer to the resp. report of the Treasurer). Two auditors, Harold Moellering and Nikolai Komedchikov, have been elected by the General Assembly. As Nikolai Komedchikov passed away to all our sorrows the EC nominated Subbarao Rao later on.

Finally, Rio de Janeiro and Brazil was determined as the venue for the International Cartographic Conference 2015 and the XVI. General Assembly.

2. Status of the discipline and the organisation

Within the term 2011 to 2015 it can be noted, that the discipline of cartography and ICA as its respective international organisation has been embedded in several global trends. The discipline of **cartography has and is facing some major challenges** due to further changes of the organisational and technological environments map production and map use is connected with. In several ways the term "cartography" is replaced or renamed, also with terms like "Geomatics", "Geoinformation Science", "Geoinformation" or similar. Geodata acquisition and automated spatial data handling have become even wider spread and are embedded as essential parts of phenomena like big data, smart environments and sensor networks. What we call "cartography", thus being competent to derive a meaningful model (to be meant as an instrument to communicate spatial information to a human user = a map) out of those ever increasing geo data collections, has become not only a competence of a few. Today maps can be created and used by individuals stocked with just modest computing skills from virtually any location on Earth and for almost any purpose. Rapid advances in technologies have enabled this revolution in map making by the millions. One such prominent advance includes the possibility to derive maps very quickly immediately after the data has been acquired by accessing and disseminating maps through the internet. Real-time data handling and visualization are other significant developments as well as location-based services, mobile cartography, augmented reality and VGI. However, while more geo data than ever is available and IT-technologies allow the access and use of maps in a ubiquitous manner the challenge of deriving, producing and using maps as efficient instruments of communicating meaningful spatial data to human users in their specific context has become eventually even more complex.

ICA as an organisation reflects in its structure and way it works an international volunteer organisation. The membership is based on national representation, very often in conjunction with national governmental institutions. Changes in the national organisation of cartography and GIScience, as are taking place currently through the changed portfolios of national mapping agencies, have therefore a direct impact on ICA. The decision making body is the general assembly, which takes decisions every fourth year, which allows for continuity but also limited flexibility. The organisation understands itself very much as a bottom-up organisation. This is especially visible in the way the commissions are organised and current trends are taken on board. As a matter of fact ICA is very much dependent in its progress, contributions, flexibility, quality and success on the spirit, ambitions and motivation of those volunteers which are willing to take a role in the organisation. Finally ICA understands itself also as the international authority for cartography and GIScience, thus sees itself as the key voice of the discipline in respective international affairs and representations such as UN bodies and international sister societies. Again, the relevance and importance of this voice is dependent very much on the ambition and motivation of ICA officers representing the organisation.

3. Mission and Visions

In tackling the mentioned challenges of the status of the discipline and the organisation and in allowing further opportunities the work of the EC for the term 2011 to 2015 was very much (1) guided by key documents and guidelines such as the existing ICA Strategic Plan, was (2) motivated by the preferences and ambitions of the EC members and finally was (3) guided by the overall strategic goal of the existing EC on strengthening the professionalism, the quality and the instruments of ICA.

The EC fully incorporated the vision being defined in the Strategic Plan as “The aim of ICA is to ensure that Cartography and GI are employed to maximum effect and full potential for the benefit of society and science through promotion and representation of the discipline and profession of Cartography and GI science internationally.” and the mission being defined as

- to see ICA recognised by the wider scientific community and society as the world authoritative body for Cartography and GI science, serving society in education and professional practice, motivating individuals and organisations throughout the world.
- to play a leading role in the International Council of Science (ICSU), United Nations bodies and the Joint Board for Geospatial Information Societies (JBGIS).
- to receive professional and scientific recognition from individuals in all related fields.
- to use its knowledge, experience and expertise to remain relevant and authoritative in the representation of geography in its widest context.
- to seek the highest quality in scientific investigation, technical processes, and academic enquiry.
- to raise the profile of Cartography and GIScience to enable them to become indispensable in all scientific and societal activities.
- to maintain pre-eminence, but also collaborating with a range of communities, in promoting research and scholarship in the disciplines of Cartography and GIScience.
- to implement its vision through its constituent parts – its member nations, Executive Committee, its Commissions and Working Groups, and appointed Committees.
- to attract membership from national Cartographic and GIScience societies, universities, government, and business and commercial organisations from every country of the world.
- to be recognised for outstanding service to its members.

The EC **translated this vision and missions** in concrete priority operating actions, including the active participation in meetings of key international organizations including the UN and ICSU, in dedicated actions towards especially developing nations, in promoting Cartographic and GI research by maintaining a contemporary Research Agenda, in enhancing education in Cartography and GI science in the broadest sense through publications, seminars, conferences, competitions and exhibitions, in communicating and promoting Cartography and GIScience through contemporary communication channels, in offering renewed or additional instruments for scientific discourse and publication such as publication media (book series, journals), in reaching out to communities of map production and map use outside traditional cartographic communities.

As an **overall focus the whole EC committed itself** especially to three overarching main aspects for the term of 2011 to 2015, which are

- **Internationalisation:** The EC recognized the international character of the organisation. ICA as a global organisation needs to pay equally respect to different conditions, aims and constraints of cartography and GIScience in different parts of the world.
- **Professionalism:** Although ICA is a volunteer organisation dedicated professionalism is required. This includes the way the EC, the Commissions and Committees are operating through e.g. meetings, documents, communication structures as well the way ICA is presenting, promoting and communicating itself and the discipline. Finally this needs to be proven on how commitment to take over functions in ICA as officer is translated into responsibility.
- **Strengthening the domain:** Given the challenges the discipline is facing (refer to part 2. of this report) the role of the main international organization as a decisive advocate cannot be underestimated. It is the ICA which is able to offer directions, to incubate new self understanding, to contribute to the wording within the domain, to promote and present the relevance, importance, functions, methods, outcome and role of maps and cartography. As key action items for strengthening the domain the focusing on the three main “business cards” of ICA, the Conferences – the Commission and the Communication Channels, have been agreed on.

4. Operational Framework of ICA 2011 to 2015

4.1 Secretary General and Treasurer

The core of the operational framework of ICA is how the president and the secretary-general can work together. It has proven to be a most productive circumstance, that the Secretary-General Prof Laszlo Zentai is based in Budapest, Hungary and the President Prof Georg Gartner, in Vienna, Austria. This circumstance allowed for several regular face-to-face meetings besides the default way of shared working through emails, skype etc. as well as for easy-to-handle actions if needed (such as e.g. transferring something). Face-to-face meetings, even on short notice, have proven to have undoubted advantages in efficiency, the better ability to gain an overview on influencing factors of an issue and the quantity and quality of the outcome.

As trying to meet the commitments of professionalism (refer to part 3 of this report) a strict 4-eyes-principle was decided as the basis of collaboration from the president and the secretary-general, thus any relevant information and decision was shared consequently. In financial terms the president and the SG agreed on following the principles of credibility, reliability, fairness and transparency always, thus treating the ICA budget as serious as possible and try to make the financial underpinning of the organisation ever more stable. It was our clear policy, that reimbursement or spending of whatsoever are strictly requiring evidence.

Furthermore a main indicator of professionalism can be seen as how reliable and prompt request, inquiries, questions, mails or issues are handled and answered. It is without doubt that the current SG has earned all our credits for his formidable abilities to meet these criteria. The longest eventual time of being not able to get any reply from Laszlo was for sure not more than a day during those four years. He has adopted his role as the always available "beating heart" of ICA. The total number of ICA-related interactions between the president and the secretary general included 22 face-to-face meetings (including EC meetings and conferences), 27 skype meetings and 4237 mails (until 15.8.2015). It is my personal wish to express on behalf of ICA my sincere thanks to Prof. Laszlo Zentai. His efforts have made a difference and helped ICA to develop into a further stage. Köszönöm!

4.2 Executive Committee

9 regular Executive Committee Meetings have taken place, usually scheduled for three days, including two site inspections of upcoming ICCs (Dresden, Rio de Janeiro). In this context the various competences, skills and experiences of the members of the EC have proven to be a benefit as well as their geographical distribution. The spirit within the EC was constructive, ambitious and committed, thus several issues have been discussed controversial as well as being revisited several times. All EC members took over the role of being a liaison person to a number of commissions as well as had the chance on selecting a flagship project for dedicating their commitment, something which proves to be heterogeneous in its outcome. All EC members took the burden on reporting twice a year about their activities as well as participated in the regular EC Meetings. Also EC members have been asked to take over the responsibility on representing ICA on behalf of the President at particular occasions, e.g. Anne Ruas (France), Yaolin Liu (China), Menno-Jan Kraak (UN-GGIM), Derek Clarke (Africa), Laszlo Zentai (Europe, Iran), Sukendra Martha (Indonesia), William Cartwright (Oceania, JBGIS), Paulo Menezes (Brazil), Timothy Trainor (ESRI User Conference, AAG, CAGIS).

The ability and availability of EC members to act as dedicated consultants to the president and the secretary-general in specific issues have proven to be a big benefit for ICA. I would like to mention as example the expertise and experience of Derek Clarke and Tim Trainor with UN bodies and their governmental underpinning or the expertise and experience of Anne Ruas, Menno-Jan Kraak, Yaolin Liu and William Cartwright in issues related to research and research organisation, while e.g. ICA benefited also from the competences and experiences in their respective region from Paulo Menezes and Sukendra Martha. I am honoured and thankful that I have been able to work with these colleagues. All of them contributed to the idea of ICA significantly and deserve our credits.

4.3 Committees

Three dedicated committees have been set in place to consult the EC. The Committee for the Selection of Award Recipients was chaired by Michael Wood and consists further of Janet Mersey, Takashi Morita, Bengt Rystedt and Babak Shamei. The Status and By-Laws Committee consists of Bengt Rystedt (Chair), Ferjan Ormeling and David Fairbairn. Finally the Publication Committee was chaired by Michael Peterson and consisted of the editors of the affiliate journals as well as ex-officio EC members. All committees have worked most effectively and deserve our credits and thanks!

4.4 Commission Chairs

Following the idea of a bottom-up organisation the commissions of ICA have various options on defining their structure, priorities and main activities to reach the respective terms of reference. During the current term there was the attempt of the EC to consult commissions towards becoming focused on realistic aims, on defining visible outcomes (flagship projects) and a clear internal structure. It needs to be said at that point, that the rules, by-laws and tradition of ICA are shaped in a way, that commissions are able to act individually and autonomously. The contact between the EC and all Commission Chairs by default was set through regular reports (every half a year) and through the EC Liaison Person. Two dedicated joint Commission Chair Meetings with the EC have taken place, one in conjunction with the first regular EC meeting 2011 in Vienna, Austria and one during the ICC 2013 in Dresden, Germany. Both meetings have proven to be most valuable, as a synchronisation of operational frameworks, an exchange of ideas and priorities and open discussions on the relevance of cartography, ICA and the ICA instruments took place. Further countless interactions between commissions and EC members took place on individual basis.

I would like to use this opportunity to explicitly thank all of those chairs, vice-chairs and members of ICA Commissions which worked altruistic and ambitiously for the sake of their commissions' aim. It is without doubt, that the commission work is the "powerhouse" of ICA and the current commissions have proven this again through their work and achievements. It is especially what the commissions are doing, what contributes significantly to the core content and perception of our discipline.

4.5 Auditors

Harold Moellering and Subbarao Rao have taken the responsibility on auditing the books and records of ICA. It is their report, which allows a final perspective on the reliability of the operational framework of ICA during 2011-2015, which I am thankful for.

4.6 Information Dissemination and Communication Officers

Communication and Dissemination issues have been given a special focus in the term 2011 to 2015. It is one of the internationally visible and respected assets of ICA that we have excellent persons in charge in this respect.

ICA News Editor Igor Drecki continued the production of high-quality ICA News. This source of ICA-related information is edited carefully and therefore most valuable not only as a record source but also as a tool to help the current ICA actors to reflect better about the relevance of their work always as they are asked by the news editor twice a year about issues being worth to be included in the ICA News. Igor Drecki fulfils his role pro actively and by this helps ICA to focus, reflect and report accordingly. I am personally most thankful for his achievements and efforts.

The ICA Webmasters Manuela Schmidt and Felix Ortag have contributed heavily to the most contemporary and pleasing look-and-feel of ICA through the ICA webpage, ICA social media channels and document designs. They have gone beyond being available on request but anticipated actively about needs and demands in this respect. The importance of qualitative and contemporary outcome in respect to modern ways of communication and information exchange cannot be underestimated. It is my personal wish to express my sincere thanks to both of them for their altruistic, tireless excellent efforts.

4.7 The ICA "Family"

Independent from the fact, if persons have currently a function in ICA, the organisation can be characterized especially by the remarkable spirit of many which understand themselves as part of "ICA",

something which I used to call the “ICA family”. I am thankful to be able to have benefited from this, as countless interactions took place helping me in my duties. I sincerely hope, that this “spirit” keeps on existing, as it is this atmosphere which makes ICA distinct.

5. Selected major achievements of ICA at the term 2011 to 2015

Please note, that not all activities, efforts, results and achievements can be listed, thus the following reflects a selection. Please refer to available detailed reports on all mentioned items on request.

5.1 The Commissions of ICA

Please note, that the major achievements of the ICA Commissions in the term 2011 to 2015 are described in the respective individual Commission Reports. I would like to mention at that point, that significant and excellent work has been done under the umbrella of ICA Commissions (incl. the joined ICA working group / IGU Commission on Toponymy) and that I consider this as a major outcome of ICA in the last four years. In not being able to highlight all the efforts and work being done in the commission I would like to ask for a dedicated look into the detailed reports of the Commissions being submitted to the General Assembly at Rio.

5.2 The International Cartographic Conferences

ICC 2013 took place in Dresden, Germany, organized by the German Cartographic Society and the Conference Director Prof. Manfred Buchroithner. The conference was a big success. Numerous excellent scientific presentations and sessions took place, most inspiring side events have been offered and several publications have been issued (4 special issues of Journals, Conference Book in the ICA Book Series, Proceedings). 524 cartographic products have been displayed in the cartographic exhibition as well as a children map exhibition was on display. The discipline of Cartography and GIScience demonstrated their enormous potential through more than 1200 participants from 69 countries, giving 438 oral and 220 poster presentations. The venue, the conference organisation and the hospitality of the German organizers have been excellent. It is my sincere wish to thank again all German colleagues, which have been involved in the organisation of ICC 2013 under the leadership of Manfred Buchroithner, for their excellent contribution to ICA.

ICC 2015 in Rio de Janeiro, Brazil is scheduled for August 2015 and has received a significant number of scientific submissions. We are all looking forward to this event. Both conferences have been embedded in overall trends, some which are independent from the domain such as economical crisis, as well as in trends related to the discipline including the changes cartography is facing currently (compare section 2 of this report). Both conferences have been again somewhat an indicator for the enormous burden, effort and responsibility the organisation of an ICC brings to a national member, and that therefore a national consensus beyond the national member organisation seems to be important for lowering burdens and risk in the future.

5.3 ICSU

ICA was accepted as full union member of ICSU (International Council of Science) at the ICSU General Assembly 2014 in Auckland, bringing a long path of applying for full membership to a successful end. The full membership lifts the domain of Cartography and ICA as the respective domain organisation on the highest level within the choir of sciences. This is not only an attribute we can be proud of but also offers unique and important opportunities of cooperation and contributions I strongly recommend ICA to follow up in future.

In order to have been finally accepted as full union member of ICSU a number of obstacles had to be taken, including (1) the necessity on qualifying through the internal scientific oriented structure of the organisation (e.g. through the research agenda, the scientific conferences), in (2) preparing full documentation and a detailed application document and in (3) gaining significant explicit support letters from national academies of science as well as from full ICSU members. It is my personal wish to highlight the instrumental role of former ICA officers in respect to (1), especially Bengt Rystedt and Ferjan Ormeling. I also would like to explicitly thank Laszlo Zentai and William Cartwright for their efforts in

respect to (2) and would like to finally express sincere thanks on behalf of ICA to IUGG, IGU, ISPRS and several national academies of science for their support.

5.4 The International Journal of Cartography

ICA as the authoritative body of Cartography and GIScience is very much interested in fostering scientific discussions, efforts and results, as this relates and translates into the core self understanding of a discipline as well as the future of the discipline and also their reputation. When it comes to Journal as outlets of scientific work in relation to ICA the three ICA-affiliated international journals Cartographica, The Cartographic Journal and CAGIS are primarily used as well as national journals. As it can be stated, that the increasing importance of journal publications for scientific careers needs to be addressed and that many cartographic scientific results are published in all kind of journals of neighbouring disciplines it was decided, to evaluate the benefit of an ICA - Journal.

The evaluation included the definition of the interest of ICA in further sharpening the scientific profile (compare part 3 of this report) as well as calculating the relevance of outlets for the existing sources of scientific activities and outcomes, such as the International Cartographic Conferences and ICA Commission Work. Besides discussing the strategic pros and cons operational models have been part of this discussion as well, such as Open Access models. For a detailed report on the history and aspects of this process please refer to the Report of the Publication Committee Chair.

As a result of the long, controversial and heterogeneous process I am personally most happy to be able to say, that the International Cartographic Association (after more than 50 years of existence) has decided to run its own journal, the International Journal of Cartography. The first issue is available at ICC 2015 as a result of the work of the installed Editors-in-Chief Anne Ruas and William Cartwright, which work currently with the Publishing House Taylor & Francis on shaping the Journal.

I would like to mention at that point the input and efforts of many in this process, including especially Zhilin Li and Michael Peterson. It is to thank also the current Editors-in-Chief for their incubation work. Finally I would like to call upon ALL OF YOU to now adopt this "new baby" of ICA by considering it for your work as publication outlet and by promoting it to your respective community.

5.5 The International Map Year

At the fourth session of the United Nations Committee of Experts on Global Geospatial Information Management at the UN Headquarters in New York 6.-8. August 2014 the ICA Initiative on an International Map Year 2015/16 was positively discussed.

It says in the resolution:

The committee endorse the International Map Year 2015-2016 as proposed by the International Cartographic Association as a valuable means to promote the importance of maps and Geoinformation.

With this a long path of preparation has successfully succeeded. The main purpose of the International Map Year (IMY) is to expose the importance of maps and geographic information in human society through several ways. In allowing to realize this original initiative of Bengt Rystedt and the Swedish Cartographic Society an ICA Working Group was installed at ICC 2011. Ferjan Ormeling, Vit Vozenilek, Serena Coetzee, David Fairbairn, Ayako Kagawa and Aileen Buckley joined in. In conceptualizing, preparing and producing relevant ideas, materials and documents ICA and the IMY working group found support from the United Nations Regional Cartographic Conference (UNRCC) in Bangkok in October 2012, which adopted a resolution stating that, on behalf of UNRCC, the International Cartographic Association (ICA) should organise the International Map Year 2015.

Significant preparatory work has been carried out since that conference, with the establishment of an IMY working group under the auspices of ICA, and the raising of the profile of IMY within the United Nations itself. Pragmatically, it was determined that the most appropriate vehicle for driving the United Nations involvement should be the United Nations' Initiative on Global Geospatial Information Management (UN-GGIM), which finally succeeded as mentioned above.

Basically two groups have been instrumental in this context. The IMY WG in delivering guidelines, resources (web site, on-line book, ideas and advice for local and national 'map days', encouragement to

hold exhibitions and competitions, event schedules) and examples. I would like to especially highlight the book "The World of Maps", which is available for free download in three languages (english, french, spanish) already from <http://mapyear.org/the-world-of-maps-overview/> and the IMY webpage, which is an attractive portal into IMY activities. And on the other hand those which have helped to bring the issue of IMY to the attention of JBGIS and UN GGIM.

Let me use this opportunity to highlight and thank especially Bengt Rystedt in his collaboration with the IMY working group and the ICA webmasters for making this initiative happen and ready to be launched at ICC 2015 in Rio de Janeiro! For the later task of working with the UN entities I would like to explicitly mention the instrumental role and help of Derek Clarke, Tim Trainor, William Cartwright, Mark Cygan, Robert Ward and Greg Scott.



At ICC 2015 the IMY will be officially opened. From now on all national delegates and cartographic organisations are asked to offer a full programme of activities and events. Common aims include to make maps more visible to citizens and school children in a global context; to display different types of maps, showing how maps can be used in society, and how technical developments have affected their production; to introduce the role of information technology in handling geographic information and how it allows individuals to make their own maps; to promote the sustainable development of geographic information infrastructures; and to increase the recruitment of students to cartography and cartography-related disciplines.

This is a great opportunity for cartography and ICA. It is up to ALL OF US to participate in this global festival of the best of mapping. (<http://mapyear.org>)

5.6 Contact and Representation at UN entities

ICA has pursued contact with the following UN entities: UN GGIM, UNESCO, UN SPIDER, UNOOSA, UN GEGN. In most cases this is request- or demand driven, however a regular contact exists due to the status of ICA as official "UN NGO Observer" especially with UN GGIM and UN GEGN.

The establishment of UN-GGIM as a strategic decision of the UN Statistical Division allows to place issues of geospatial information management in the focus of UN discussions. Thus organisations such as ICA have a high interest in the directions, resolutions and outcomes of these discussions. Therefore participation in person on the highest representation level as well as eventual active contributions to UN-GGIM have been of highest priority for ICA. It is a most valuable coincidence that VP Derek Clarke and VP Tim Trainor have been and (currently still are) accredited as national delegates of their respective home country and have also been invited to accept roles in the UN-GGIM administration. I would like to highlight the fact, that Tim Trainor has been elected Vice-Chair of UN-GGIM just recently (August 2015). I would like to highlight also the fact, that Past-President William Cartwright played several roles in his capacity as JBGIS Chair in UN-GGIM activities. All of this helped ICA to gain visibility and acceptance in this body, which was especially of importance when the endorsement of UN-GGIM for IMY was under discussion.

5.7 Joint Board of Geo Information Societies

JBGIS is a coalition of recognized international geospatial organizations involved in the coordination, development, management, standardization or regulation of geospatial information and related matters, represented by the Presidents or equivalent office bearers that lead those organizations.

This coalition becomes especially important when the "Geo-Domains" being represented in the JBGIS need to find one voice, as e.g. in the context of United Nation Activities or other International and Interdisciplinary Frameworks. It is therefore of importance to ICA, that the JBGIS is recognized by the United Nations Initiative on Global Geospatial Information Management (UN-GGIM).

The JBGIS chair position rotates between the member organizations. It happens to be, that our Past President William Cartwright was elected chair of the JBGIS 2011. Due to the fact, that his leadership was unanimously perceived as crucial for the further development of JBGIS he was asked to prolongate his term as chairs twice until 2014, which was an exceptionally affair, giving him as well as ICA a most prominent profile in this respect. This was also instrumental in the unanimous support of JBGIS for the ICA initiative of the IMY. I would like to take the opportunity to express my sincere thanks to Past-President William Cartwright for his excellent work in this respect.

5.8 Sister Societies and Memorandum of Understandings

The International Cartographic Association has close relationships to neighbouring domains and their International Organisations, we even call them Sister Societies. This goes as far as having joined activities, including e.g. a joined Working Group on Toponymy with the International Geographical Union (IGU), a joined International Board of the International Federation of Surveyors (FIG), the International Hydrographic Association (IHO) and ICA for Standards and Competences (IBSC), joined Sessions at the vice versa conferences with the International Society for Photogrammetry and Remote Sensing (ISPRS), joined interests and participation at the events of the International Steering Committee for Global Mapping ((ISCGM), the International Map Industry Association (IMIA), the International Association of Geodesy (IAG) or the Global Spatial Data Infrastructure Association (GSDI).

This existing relationships to sister societies have been pursued further. All of those contacts have proven to be useful and partly instrumental e.g. in the application phase for ICSU Membership or in gaining the UN GGIM endorsement for the International Map Year.

The membership to GEO was achieved 2012 and gives ICA access to this intergovernmental and international body of primarily geodata acquisition and handling issues.

Further Memorandum of Understandings have been discussed, concepted and signed in the term 2011 to 2015. The MoU signed with OSGeo (2011) turned out to be specifically successful and was recently renewed (2015) as a fundament for further cooperation in respect to the "Geo4All" and "ICA-OSGeo-ISPRS Labs" Initiatives. The full list of MoU can be found at <http://icaci.org/memoranda-of-understanding/>.

A special connection exists with IHO. There is a FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers. The ICA representatives Lysandros Tsoulos and Ron Furness have made ongoing significant contributions in this board. ICA is most thankful for this. A succession plan as a prerequisite for the further involvement of ICA in this respect is urgently necessary.

5.9 "ICA-OSGeo Labs" and "Geo4All"

The "Geo for All" Initiative (www.geoforall.org) has developed out of the Memorandum of Understanding Activities between ICA and OSGeo (the Open Source Geospatial Foundation). So-called "ICA-OSGeo Labs" have been founded in unexpected high numbers since then and have reached a number higher than 100 in the meantime (<http://www.geoforall.org/locations/>), demonstrating the great interest and demand for evaluating and using Open Source Software in the area of Cartography, GI Science and Geospatial Information Management.

In order to direct the development of this initiative an Advisory Board has been found, co-chaired by the Presidents of ICA (Georg Gartner) and OSGeo (Jeff McKenna). Due to the inclusive character of this initiative and a strong interest being expressed several times from the International Society for Photogrammetry and Remote Sensing ISPRS is now joining this initiative.

5.10 Publications

ICA has a long tradition in publishing results of ICA-related work. This includes book, journals, proceedings and online resources (<http://icaci.org/publications/>). For the discussion on journals see chapter 5.4.

- Book Series

Books have been published with Butterworth Heinemann, Map Collector Publications and Elsevier in the past. Since 2011 ICA is entitled to publish results of their activities, such as commission work, conferences or symposia in a subseries of the Lecture Notes on Geoinformation and Cartography of the Springer-Verlag, called "Publications of the International Cartographic Association". Currently eleven projects are listed in this series, some of them in progress (please refer also the resp. reports of ICA Commissions).

I would like to highlight also the production of two books as outcomes of the Barbara-Petchenik Children Map Competition. SinoPress, based in China, published 2015 the book "The World as seen by children" and ESRI Press, based in the USA, published 2015 the book "Children Map the World". In this respect it is to thank the tireless efforts of Jesus Reyes, Temenoujka Bandrova, Diah Kresnawati, Ana Garra, Carla Senna and Necla Ulugtekin for making this happen!

- Online Proceedings

The online availability of all proceedings of International Cartographic Conferences since 1993 has proven to be a most useful source (<http://icaci.org/publications/>). There is the clear aim on continuing this service after the next conferences as well. At that point I would like to mention the two ICA Webmasters which have made quite some efforts to have this service up and running: Manuela Schmidt and Felix Ortig, both from Vienna University of Technology, Austria.

- ICA News

The biannual newsletter "ICA News" (<http://icaci.org/ica-news/>) is edited by Igor Drecki from Auckland University, New Zealand. This publication is strongly committed to ICA-related information, being presented in high-quality in terms of both, content and design. All newsletters can be downloaded for free from the ICA website.

- ICA Columns

A regular ICA column exists since several years in the magazine GIM International. Dedicated communication and meetings with the editor Durk Huursma have taken place several times to strengthen and continue the good relationship, which was used to e.g. add further articles before ICCs as a promotional aspect. In respect to the regular column of ICA in GIM International I would like to take the opportunity to explicitly thank David Fairbairn for coordinating and partly writing the regular column since many years and thus giving ICA a most important outlet into the professional GI world. I would like to also thank Durk Huursma for the always uncomplicated, friendly and constructive cooperation.

As a result of several face-to-face communication between Georg Gartner, other EC members and Jack Dangermond some concrete ways of cooperation between ICA and ESRI beyond their traditional strong role as affiliate member were discussed. Key outcomes included the envisioning of a "Cartographic Summit", which is scheduled for February 2016 and under preparation currently, and a regular column of ICA in ArcNews. The so-far 4 columns which have been published in ArcNews have all been written by myself and caused – maybe due to the enormous readership of ArcNews – unexpected high positive response. I strongly recommend to continue this cooperation and to use this opportunity particularly as an outlet of the president's perspectives. At that point it is my personal wish to thank our affiliate member ESRI for their ongoing strong support and cooperation.

- ICA eCarto News

The former Chair of the ICA Commission on Education, Dr David Fraser, has issued a monthly newsletter collecting news related to "geo" issues, maps and cartography under the umbrella of the commission. Given the interest this gains and the wish on having this available to a wider community the EC invited David to issue this now as "ICA eCarto News" via the channels of the whole organisation. The countless positive reactions demonstrated the acceptance of this service as a further benefit of ICA to its members.

- The ICA webpage

The conceptualization, further maintenance and development of a contemporary ICA web portal including the option on having social media channels (Twitter, Facebook, Youtube) available as well as dissemination instruments (RSS, Email Lists) was given priority. It is without doubt, that a discipline considering itself as being competent in issues of communication and design is judged even more critical in this respect. The webpage is clearly designed, well structured and up-to-date as have been stated by several comments from ICA colleagues as well as outside ICA. Several features have been introduced in this term, including a president's blog (36 presidential blog entries have been written), an internal section

for the EC and Commission Chairs, full access to all digitized ICC proceedings, full availability of comment functions for the Research Agenda documents, adding of content (such as historical data about former ECs, Awardees) to name a few. The task of offering a contemporary webpage is a permanent one and I strongly suggest to the next EC to put again a dedicated focus on this.

- Further publications

In following invitation I wrote several columns and articles on Modern Cartography and the role of ICA, such as in Geospatial Today (2012, with William Cartwright), Coordinates (2012), GeoSP (2012, Arab Journal), GIM International (2012), GISPortal.cz (2012), Standard (2012, Austrian Newspaper), New Scientist (2013), VALID (2013, UNOOSA and JBGIS Publication on the Value of Geoinformation in Disaster Management, with Milan Konecny), Sächsische Zeitung (2013), Geospatial World (2013), Geospatial Media (2014), Coordinates (2014), Here (2014, WebBlog of the company "Here"), Arcana GIS (2014, Polish ESRI Magazine), ISCGM Newsletter (2015), all of them meant as promoting the discipline and the organisation.

5.11 ICA Research Scholarship

In following the idea of sharpening the profile of ICA in terms of fostering scientific activities and in evaluating the outcome of the existing instrument "Travel Awards" a new instrument was unanimously adopted from the EC. The so-called ICA Research Scholarships aims on getting young scientists to know about ICA and to get ICA to know about young scientists. It is meant as an instrument to foster academic research in the domain of Cartography and GIScience, to establish contact between young scientists and ICA Commissions, to support young scientists to be able to actively contribute to ICA activities and events, such as especially International Cartographic Conferences and to establish opportunities for young scientists within ICA publications and conferences. This is done by a financial grant to those, which qualify through reference letters from an ICA Commission Chair on the relevance and importance of their work to be presented at an ICA event. With this instrument a policy has been set in place which I recommend to pro actively use.

5.12 Outreach and Capacity Building

Dedicated synchronized outreach and capacity building programmes of ICA do not exist. It is rather the initiative of several commission, such as e.g. Education, Maps and the Internet, Open Source Geospatial Technologies to name a few, which leads to workshops, programmes or activities in respect to capacity building. The structure of ICA and its commissions was eventually not ready for the attempt on helping to synchronize activities through a dedicated Working Group, which was established at ICC 2011 but terminated a year later.

However, several activities have taken place in answering the aim of ICA to offer outreach and capacity building programmes, such as Hands-on Workshops in Tunisia (2012), a dedicated workshop for UN Staff in Vienna (2012), Sint-Maarten (2014), Botswana (2014), Uganda (2014), Tonga (2014).

5.13 Membership

Countless attempts have been made in every respective context to promote the advantages of national and affiliate membership to ICA. This was especially done through occasions such as UN GGIM meetings, where several national decision makers gather, but also in other events such as big conferences, sister society meetings or strategic visits (e.g. India). With more than twenty candidate countries respective communication has taken place in some kind of sense, as well as with several candidates for affiliate membership (Iceland, Tunisia, Romania, Jamaica, Nepal, Belarus, St Lucia, Jamaica, Barbados, Trinidad & Tobago, Guyana, Haiti, Bahamas, Tonga). However, the list of final approval for new members as tabled at the General Assembly 2015 is cleared from any interim candidates. It has proven to be not straightforward currently to win new membership, something which I see related to the challenges section of this report as well as eventually with the changes of general expectations towards membership in an international volunteer organisation. It is without doubt, that ICA needs to carefully evaluate strategies in this respect and consider this as a high priority in every single term.

5.14 Representation and Keynotes

Representing the organisation is one of the noble core responsibilities of the President. By doing this priority was given in answering strategic aims of ICA, in answering dedicated invitations, in pro-actively

establishing connections and in operational meetings. All together I participated and represented ICA at the following occasions with travel constraints (the numbering, e.g. “#xx”, follows a chronological ordering; full reports available):

- (1) Representing ICA in international bodies (strategic aim of ICA)
#5 ICSU General Assembly (Rome, Italy), #7 UN GGIM Forum (Seoul, Korea), #11 IHO General Assembly (Monaco, Monaco), #13 GeoWorldForum (Amsterdam, The Netherlands), #17 UN GGIM (New York, USA), #24 UN Crowdsourcing (Vienna, Austria), #26 UN GGIM (Doha, Qatar), #31 GeoWorldForum (Rotterdam, The Netherlands), #32 UN Regional Cartographic Conference for the Americas (New York, USA), #34 UNOOSA (Vienna, Austria), #37 CIGMA (Ciudad de México, México), #38 EuroSDR (Gävle, Sweden), #40 GEO Ministerial Summit (Geneva, Switzerland), #45 UNOOSA (Vienna, Austria), #46 GeoWorldForum (Geneva, Switzerland), #50 UN GGIM (New York, USA), #51 ICSU General Assembly (Auckland, New Zealand), #64 FIG Working Week (Sofia, Bulgaria), #66 IGU (Moscow, Russia)
- (2) Representing ICA in following dedicated invitations
#2 Slovak Cartographic Conference (Bratislava, Slovakia), #3 Croatian Cartographic Conference (Split, Croatia), #6 INCA Conference (Chandigarh, India), #8 Jubilee of Austrian Cartographic Commission (Vienna, Austria), #9 Jubilee of German Cartographic Society (Berlin, Germany), #12 Mercator Conference (Sint-Niklaas, Belgium), #14 SIMGEO (Recife, Brazil), #16 Conference on Cartography and GIS (Albena, Bulgaria), #18 ISPRS Conference (Melbourne, Australia), #19 ICA Regional Cartographic Conference (Auckland, New Zealand), #20 ICA Mountain Cartography (Taurewa, New Zealand), #22 URISA (Montego Bay, Jamaica), #23 SOMAP (Vienna, Austria), #28 Art and Cartography (Zagreb, Croatia), #30 Cartographic Symposium (Königsplatz, Germany), #35 BCS Jubilee Symposium (Hothorpe, UK), #36 CartoTechnology (Barcelona, Spain), #42 CartoCon (Olomouc, Czech Republic), #44 InterGeo Asia (Istanbul, Turkey), #47 Mobile Mapping (Suzhou, China), #49 AfricaGEO (Cape Town, South Africa), #54 Cartographic Conference (Zagreb, Croatia), #59 DGfK IMY Launch (Berlin, Germany), #61 Middle East Geospatial Forum (Dubai, UAE), #62 RSA IMY Launch (Cape Town, South Africa), #63 Power of Maps & AUS IMY Launch (Canberra, Australia), #65 FOSS4G (Como, Italy)
- (3) Active promotion of ICA and establishment of connection/collaboration
#4 InterGEO (Nürnberg, Germany), #10 GeoTunis (Tunis, Tunisia), #21 InterGEO (Hannover, Germany), #29 GeoSiberia (Novosibirsk, Russia), #39 Africa GIS (Addis Ababa, Ethiopia), #41 URISA High Level Forum (Sint-Maarten, Sint-Maarten), #48 NMA (Gaborone, Botswana), #52 NMA (Nuku'alofa, Tonga), #53 NMA (Kampala, Uganda), #55 IGN (Buenos Aires, Argentina), #56 IGM (Montevideo, Uruguay)
- (4) Meetings of operational importance for ICA
#1 ICC 2013 Preparation Meeting (Dresden, Germany), #15 Site Inspection (Dresden, Germany), #25 ICC 2013 Preparation Meeting (Dresden, Germany), #43 IBSC (Monaco, Monaco), #60 GA Preparation Meeting (Budapest, Hungary)

In the given context I have given all together 53 keynotes, promoting the relevance of cartography and the role of ICA.

5.16 ICA Documents

Documents for internal use as well as promotional materials for ICA have been produced. I would like to highlight especially the ICA Directory, a useful collection of all relevant documents (statutes, by-laws, guidelines, strategic plan, research agenda, EC, Commissions, Awardees), which was edited by the Secretary-General. I would also like to highlight the several reports and minutes, which have been taken and used at every single occasion of an ICA meeting and are vital for the operation of the organisation.

Major documents are the strategic plan, which is in place and has not been altered, and the Research Agenda (RA). The RA was meant as a live document, allowing for comments and edits, but only minor interaction took place. It is without doubt, that the RA needs to be revisited in the next term, eventually in combination with an ICA-driven Body of Knowledge of our domain.

A standard header for documents was introduced, offering meta information such as date, version, venue, rapporteur. I proposed a formal meta document policy to the EC for further use.

6. A Tribute to outgoing officers

There are colleagues amongst us, which are passionate about cartography and GIScience. Because of that and because of their interest in sharing ideas, methods and results they might have somehow visited an ICA event at some time in the past, maybe a Commission Meeting or an International Cartographic Conference. They then eventually found it rewarding, getting not only reactions on their own work but also inspiration from listening and talking to other colleagues. Maybe they made friends, build networks or started cooperation's. At one point they might have been asked to take over responsibility for a function within ICA and they felt honoured about this. They then devoted time and effort in their role to answer the responsibility and expectation which comes along with such functions. They become the ambassadors and advocates of ICA in their respective role, they give time, thoughts, ideas and efforts. They are ICA.

It is on us to thank all those outgoing ICA officers, which will have no further function in ICA after ICC 2015. Let me explicitly mention in this respect Past-President William Cartwright, Vice President Derek Clarke, Vice President Sukendra Martha, Vice President Timothy Trainor, Vice President Anne Ruas, Commission Chairs Peter Jordan, Jesus Reyes Nunez, Antony Cooper, Gennady Andrienko, Elri Liebenberg, Philippe de Maeyer, Chris Perkins, Karel Kriz, Lorenz Hurni, Steve Chilton, Cornè van Elzakker, Qingyun Du, Xiaojun Yang, Xiaoyong Chen, Suchith Anand, Bin Jiang.

Thank you!

7. Summary and Future Challenges

Driven from the fast changes of even more technologies influencing geo data acquisition, handling and dissemination and the ever increasing amount of big geo data maps will increase in their importance as most effective and efficient interface between spatial information and human users. Cartography as the solely discipline dealing with all aspects of the respective demands and needs, thus with data handling, with new technologies (for map production and map use) and with design issues, is asked to answer this challenge.

As such future challenges exist, I recommend ICA to evaluate optional membership types, to define clear envisioned flagship projects, to sharpen the profile of ICA even further, to develop a dedicated programme on synchronized activities in relation to outreach and capacity building, to pursue further the goal of offering a high quality scientific platform through existing and eventual further instruments, to renew the research agenda, to consider working on a domain-specific Body of Knowledge, to pro actively promote cartography as authoritative organisation in international meta organisation such as the UN and ICSU, to strengthen and support efforts of members for dedicated education programmes and national cartographic activities, to further professionalize the organisation and to have a clear vision about how we name what we are doing.

I consider the opportunity to serve the International Cartographic Association as President from 2011 to 2015 as a true privilege. I will always look back on this with pleasure and true gratefulness.



Prof. Dr. Georg Gartner
Vienna, August 2015