



president's report



Dear Colleagues

On 8 and 9 November 2015, Chairs of the ICA Commissions and Working Groups, and members of the ICA Executive Committee (EC) met in Vienna to discuss the future

activities of the International Cartographic Association. The objective of the workshop was to offer ICA officers a good and fresh start to the 2015-2019 term. In addition, the meeting gave us an opportunity to meet new and old friends, and to become familiar with each other.

The workshop, hosted by ICA Past President Georg Gartner at the Technical University of Vienna, had three distinctive parts. The first two dealt with the ICA's expectations from its members and officers and what is expected

from the ICA in return. The third part was linked to the International Map Year (IMY) and the United Nations (UN) sustainability goals.

What ICA expects from you

After an introduction round, László Zentai, our Secretary General, briefed us on how ICA Commissions and Working Groups are supposed to operate according to our statutes and by-laws. This included information on how to organize a Commission (chair responsibilities, website, members, etc), how to communicate within ICA (biannual reports to the EC, *ICA News*), what are the options for publication of results (our *International Journal of Cartography*, Springer book series), how to organize activities related to the International Cartographic Conferences (reviews, workshops, business meetings), and what financial support is available.

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ica awards 2015

The International Cartographic Association (ICA) has instituted a number of awards for outstanding service to the ICA and to cartography generally. At the 27th International Cartographic Conference in Rio de Janeiro, Brazil, the following awards were presented:

- The ICA Honorary Fellowship to **Dr David Fairbairn** (United Kingdom)
- Diplomas for Outstanding Services to ICA to **Corné van Elzakker** (The Netherlands), **David Fraser** (Australia), **Elri Liebenberg** (South Africa), **José Jesús Reyes Nuñez** (Hungary) and **Vladimir Tikunov** (Russia)



Citation for Dr David Fairbairn

It gives me great pleasure to give the laudation on the occasion of the awarding of the ICA Honorary Fellowship to Dr David Fairbairn.

I have known my colleague and friend, David Fairbairn for many years, having first met at British and ICA conferences. As well, David spent a sabbatical at my university whilst undertaking research in Australia. David and I worked as colleagues for ICA, firstly when we were both Vice-Presidents of ICA, being elected at the Durban, South Africa General Assembly. In the next term we again served ICA, David as Secretary-General/Treasurer, and me as President. So, I know David very well and I am most aware of his dedicated work on behalf of ICA.

David's 'day' job is at the Newcastle University in the United Kingdom.

Here he is the Degree Programme Director and undertakes research in the areas of accuracy of crowdsourced data and geovisualization and querying of spatial databases. In ICA he has held a number of positions, namely:

- Vice President of ICA (2003-2007)
- Secretary General and Treasurer (2007-2011)
- Chair of the ICA Commission on Education and Training (from 2012)

David has also represented ICA, as one of the ICA representatives (with me) on the Joint Board of

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Prof Georg Gartner and Jeff McKenna shake hands after renewing the MoU between the Open Source Geospatial Foundation and the International Cartographic Association on 16 July 2015 in Como, Italy | Photograph courtesy of Jeff McKenna



What makes us cartographers? Are we really understood? The ethical dimension of our profession requires us to be truthful in our work. Looking closer this translates to maintaining the high quality of our products by utilising the best sources of information, applying sound cartographic knowledge, and creating a map that fits its purpose, is complete, accurate and aesthetically engaging. Sounds simple, but in reality a cartographer needs to possess the right skills and talents to be truly successful and credible. Our love of being accurate is proverbial, but there is also a deep sense of responsibility and professional satisfaction to consider too. Releasing a map we know is not up to standard creates a scar on our conscience. If repeated, this leads to frustration and ultimately ethical crisis.

It is rare for us to fall into this trap ourselves. Quite often it is the result of not being understood by those in charge of business or strategic plans that contrast with our professional principles. We are particularly vulnerable when working in a commercial environment, but working for the government or academia we are not immune either. We express ourselves through maps, hence the map is a testimony of who we are. A good map gives us satisfaction and fulfils our professional responsibility. We need space to remain truthful in our work, to remain cartographers. If we are not allowed that freedom, it is an indication of not being understood. And for the sake of who we are, can we afford this?

This 32-page issue of ICA News is the first in the 2015-2019 term. In addition to many familiar features, it contains the first report by our new President Menno-Jan Kraak and introduces the new Executive Committee. It celebrates achievements of ICA award recipients and provides detailed accounts of the ICA General Assembly and ICC 2015 held in Rio de Janeiro. IMY celebrations around the globe feature strongly together with an invitation to ICC 2017 in Washington D.C. I hope you find this issue interesting.

Igor Drecki | Editor ICA News | ICA ●

The **ica news** is published by the International Cartographic Association (ICA).

President: **Menno-Jan Kraak** | University of Twente | *The Netherlands*

Secretary General & Treasurer: **László Zentai** | Eötvös Loránd University | *Hungary*

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Assistance of the **Hong Kong Polytechnic University** with the production and distribution of *ICA News* is gratefully acknowledged.

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president's report cont...

This might seem trivial since all information is available on the ICA website, but it proves that these sessions are useful after all.

In an exercise, the commissions' chairs had to revisit their terms of reference, and decide which ones to focus on in the next four years. These so called flagship projects could be joint commissions efforts. They also had to think about their planned activities in the short term and in terms of the whole 2015-2019 period, and allow for sharing and combining events. Lastly, they had to indicate how they would contribute to the International Map Year.

What do you expect from ICA

This session started with short presentations by different EC members on various ICA instruments, such as our strategic plan, the ICA directory, publications, the research agenda, our scholarships, and ICA external relations with the Joint Board of Geospatial Information Societies (www.fig.net/jbgis/) and the International Council for Science (ICSU) GeoUnions (www.icsu-geounions.org). The Joint Board unites international organizations involved with geospatial information and strives to act as a collective and unified voice at the international level, such as the United Nations (UN). The GeoUnions, on the other hand, represent those geo-related organizations that are members of ICSU (www.icsu.org).

After this information exchange, the chairs were asked to react and express their opinions about our instruments, both from a positive and negative perspective. They were also asked to come forward with any issues they would like to see addressed for the benefit of ICA's operation.

IMY / Mapping the sustainability goals

The third part of the workshop dealt with the International Map Year and how the ICA can make an impact by "mapping" the sustainability goals.

The new UN 17 sustainability goals can be found at sustainabledevelopment.un.

[org/?menu=1300](http://www.ica.org/?menu=1300). Each of these goals has a specific objective. For instance Goal 4 on education states: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". For each of the 17 goals, a number of targets have been set. One example of an educational target is "By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes". To see if those targets are met, multiple indicators have been defined such as, for instance, a completion rate (primary, lower secondary, upper secondary, etc).

These indicators can be mapped, either as an individual variable or in combination with each other. During the IMY, ICA will organize a cartographic exhibition at the next United Nations Committee of Experts on Global Geospatial Information Management meeting in New York in August 2016. The plan is to create a set of 17 posters, one for each of the sustainability goals, that demonstrate how maps can help to illuminate these goals. The idea is not just to create a single map for each goal, but to offer different cartographic perspectives utilising story maps. These perspectives will be showcased by our Commissions, which will map each of the 17 goals by employing their expertise and skill sets. For instance, the Commission on Visual Analytics might demonstrate how an exploratory environment can combine different indicators to reveal trends, the Commission on Mountain Cartography could showcase how the landscape influences the distribution of certain phenomena, while the Commission on Map Projections might present good and bad examples of global projections depending on the purpose of the map.

The final goal of this exercise is to create an atlas showcasing best practices in mapping sustainability goals. The atlas should be ready by the end of the 2015-2019 period.

Menno-Jan Kraak | President | ICA ●

Joint Workshop of the ICA Executive Committee with the ICA Commission Chairs and Vice Chairs in Vienna, Austria, 8-9 November 2015 | *Photography László Zentai*



profiles ica executive committee 2015-2019

menno-jan kraak



Working with maps is my passion. As Professor at the University of Twente, I teach about maps and do research to find new cartographic representations to visualize time. Throughout my career, I have been active in professional organizations, first in the Netherlands only and later internationally. The ICA has been part of my professional life for a long time. I attended my first International Cartographic Conference in 1989. Since 1995 I have played a more formal role, first as Co-chair and later Chair of the Commission on Visualization. Between 2007 and 2015 I acted as Vice President of ICA. For the next four years it is a privilege to serve as President of our wonderful organizations. My motto is: *Let's make the world a better place with maps.*

sara fabrikant



I am a Swiss mapemetician and love maps so much that I wear them when delivering talks. As professor and head of the Geography Department at the University of Zurich, and leading its Geographic Information Visualization and Analysis group, this happens regularly. My research and teaching interests lie in geovisual analytics, GIScience and cognition, graphical user interface design and evaluation, and dynamic cartography. I have been a member of the ICA Commissions on Visual Analytics, and User and User Issues, and chaired the Commission on Cognitive Visualization that I built from the ground up. I have served as a PC co-chair for AGILE 2008, GIScience 2010, CartoCon 2014, and COSIT 2015, and been a member of national cartographic societies (US, Canada, Switzerland), including the AAG.

yaolin liu



I am Chair Professor of GIS, Director of Ministry of Education Key Laboratory for GIS, and Dean of the School of Resources and Environmental Science at Wuhan University, China, which is regarded as China's base for cartography education. I am leading China's largest, longest, and most productive cartography and GIS program in the world's largest educational institute for surveying and mapping (formerly Wuhan Technical University for Surveying and Mapping), and have actively participated in the international cartographic community since 1990s. I have a family of cartographers and GIS specialists, which makes both my life and work cartography-centric.

monika sester



Coming from a geodetic background, I am fascinated by the automation in mapping, thus in linking cartography and computational methods. I have been active in national societies and their international counterparts for a long time – mainly in cartography and photogrammetry, i.e. ICA and ISPRS. These societies are my scientific home – they have enabled my career and stimulated my research, for which I am very grateful. I am deeply convinced that research networks in scientific societies like ours are a prerequisite for advancing science and strengthening the research capacity – bringing together a world-wide expertise. I am looking forward to foster joint activities with sister societies and to further increase the attractiveness of ICA through its activities.

vít voženílek



Maps and atlases make me hot. In 2001, I established Department of Geoinformatics at Palacký University, currently the leading cartographic department in Czech Republic. As head and professor, I manage education, research and outreach activities in cartography and GIScience. I teach thematic and atlas cartography and undertake research in geosciences, where geovisualization plays a crucial role. I have been active in the Czech Cartographic Society and later in the ICA Commissions on Education and Atlases. I organized the Czech national cartographic conferences in 1997 and 2009. ICA provides a permanent source of knowledge and inspirations in my work and a community of similar, crazy friends. My aim is to serve ICA by dedicating my knowledge, experience, enthusiasm and my energy.

lászló zentai



After serving as a Secretary General and Treasurer of the ICA in the 2011–2015 term, I have been asked by the new President to continue in this role for another term and utilize my experience. Working in this position and serving the ICA is indeed something special, a privilege, but also a continuous service. My major international ICA activities included organization of four joint ICA Commissions meetings and a meeting of the ICA Executive Committee in Budapest in 2003. I am Professor and Head of the Department of Cartography and Geoinformatics at the Eötvös Loránd University in Budapest. I am also serving as Vice-Dean of the Faculty of Informatics. I am an active orienteer and serve on the International Orienteering Federation's Council.

david forrest



I have always been fascinated by maps and have fond memories of a primary school atlas that showed how Australia was gradually explored and the territories developed. I am a Senior University Teacher at the University of Glasgow where I have taught cartography for over 20 years and I still enjoy sharing my enthusiasm for maps and map design with students, on the only programme in the UK to retain a focus on cartography. Increasingly my research is on maps for use by the public, such as tourist and transport maps, and their usability. A past President of the British Cartographic Society, involvement in the ICA has allowed me to further develop international co-operation and give more back to the subject that has dominated my life.

pilar sánchez-ortiz



I discovered my passion for cartography while studying towards my degree in Technical Engineering in Topography at the Polytechnic University of Madrid. Since then, and throughout my 25 years of trajectory at the National Geographic Institute of Spain, I have been fortunate to live off and for cartography. In this sense, I have developed most of my professional career within the fields of atlas and thematic cartography. I am Head of the Thematic Cartography and National Atlas Department, as well as Secretary General of the Spanish Society for Cartography. In consonance with my professional commitments, my main goal within the ICA will be to foster the application of rigorous cartography in order to make it more accessible, useful, attractive and amusing for its users.

lynn usery



I am Research Physical Scientist and Director of the Center of Excellence for Geospatial Information Science, for more than 27 years with the USGS and 17 years as a professor in the academy. I conduct research in cartography, geospatial semantics and ontology, map projections, and high performance computing for geospatial data. I received BS, MA, and PhD degrees in geography and am a Fellow of the Cartography and Geographic Information Society (CaGIS) and the University Consortium for Geographic Information Science. I received the CaGIS Distinguished Career Award in 2012. I am Vice President of the ICA, and Chair of the Local Organizing Committee and Director of the 2017 International Cartographic Conference in Washington, D.C.

georg gartner



I am Professor of Cartography at Vienna University of Technology, Austria. I have always felt privileged working in cartography, a discipline with so many interesting challenges and possibilities. It is this passion which I committed to ICA during my Presidency 2011-2015 and keep on doing so as immediate Past President. I see cartography as a modern, relevant and attractive discipline. My experiences with ICA have proven to be rewarding, as I found it useful and stimulating to meet and cooperate with so many colleagues who share the passion and interest in cartography and maps.

President

Menno-Jan Kraak | University of Twente
| *The Netherlands*

Secretary General & Treasurer

László Zentai | Eötvös Loránd University
| *Hungary*

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ica news contributions

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Submission Deadlines

15 May for June editions

15 November for December editions

ica awards 2015 cont...

Geospatial Information Societies. The Joint Board is a coalition of leading international geospatial societies that speaks on behalf of the geospatial profession at international level, especially to the United Nations and other global stakeholders. He also supports the ICA agenda, by being the editor of the ICA column in the *GIM International* magazine. He has also written many reference works.

In the United Kingdom, David contributes to the activities of the British Cartographic Society, the British member of ICA. He is a Fellow of this Society and he has been editor of *The Cartographic Journal*, the journal of the British Cartographic Society.

David has contributed to ICA over many years. I applaud his devoted work for ICA and cartography. I consider that this award to David recognises his devotion to activities that support and grow our Association. Dr David Fairbairn – a most deserved awardee of the International Cartographic Association's Honorary Fellowship. Congratulations David.

William Cartwright | Former ICA President (2007-2011) | *Australia* ●



Recipients of the 2015 ICA Awards: (from left) Trisha Moriarty (representing David Fraser), José Jesús Reyes Nuñez, Elri Liebenberg, David Fairbairn, Vladimir Tikunov and Corné van Elzakker | *Photography László Zentai*

Awardees of Diplomas for Outstanding Services to ICA

The Diploma for Outstanding Services to ICA is presented to individuals and organisations for their exemplary service to the International Cartographic Association. Here are the 2015 recipients of the award with highlights of their outstanding contributions:

Corné van Elzakker

- Chair of the ICA Commission on Use and User Issues (2007-2015)
- Chair of the International Jury – ICA International Cartographic Exhibition (2007-2013)

David Fraser

- Chair of the ICA Commission on Education and Training (2007-2012)
- Inaugural Editor of the *eCARTO News*, a monthly electronic bulletin on cartography (from 2012)

Elri Liebenberg

- Vice President of the International Cartographic Association (1999-2003)
- Chair of the ICA Working Group on the History of Colonial Cartography in the 19th and Early 20th Centuries (2003-2007)
- Chair of the ICA Commission on the History of Cartography (2007-2015)

José Jesús Reyes Nuñez

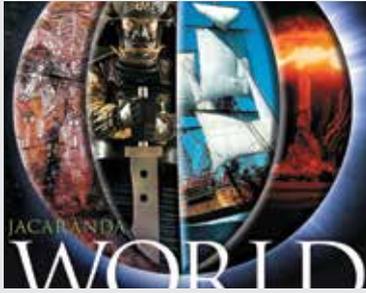
- Chair of the ICA Commission on Cartography and Children (2007-2015)
- Coordinator of the Barbara Petchenik Children's World Map Award (from 2007)
- Chair of the International Jury – Barbara Petchenik Children's World Map Award (2005 and 2007)

Vladimir Tikunov

- Chair of the ICA Commission on Education and Training (1999-2003)
- Vice President of the International Cartographic Association (2003-2007)
- Chair of the ICA Working Group on GIS and Sustainable Development (2007-2011)
- Chair of the ICA Commission on Geographic Information for Sustainability (2011-2015)

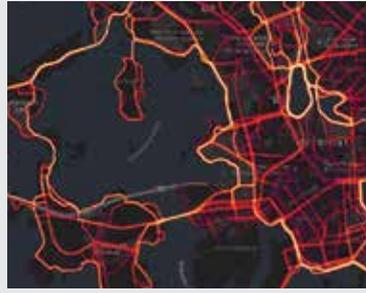
László Zentai | Secretary General & Treasurer | *ICA* ●

august



Jacaranda World History Atlas for the Australian Curriculum | John Wiley & Sons | *Australia*

october



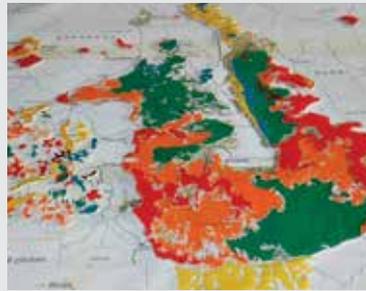
Project Supra (digital product) | Finnish Geospatial Research Institute and Åbo Akademi | *Finland*

november



3D Map Longyearbyen and Environs | Norwegian Polar Institute | *Norway*

december



Kakamega-Nandi Forests Puzzle | Karlsruhe University of Applied Sciences and Kenyan partners | *Germany / Kenya*

icc 2019



The 17th General Assembly of the International Cartographic Association (ICA) and the 29th International Cartographic Conference (icc2019.jpn.org) will be held in Tokyo, Japan (date to be confirmed). These events are being organised by the National Committee for Cartography, Science Council of Japan. Professor Takashi Morita from Hosei University and President of the Japan Cartographers Association has been appointed Chair of the Local Organising Committee. The National Museum of Emerging Science and Innovation (Mirairkan), Tokyo Academic Park, located in the beautiful Tokyo Bay area has been selected as the main conference venue.

Igor Drecki | Editor ICA News | ICA ●

Miraikan, venue of the ICC 2019 in Tokyo, Japan



international map year 2015-2016

mapyear.org



The International Map Year (IMY) was officially launched at the Opening Ceremony of the 16th International Cartographic Conference in Rio de Janeiro, Brazil, on 24 August 2015 by Gregory Scott, United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), assisted by Georg Gartner, ICA President, and Bengt Rystedt, Chair of the ICA Working Group on International Map Year.

IMY celebrations will continue until the end of 2016, while the Working Group – until the end of its term in 2019. ICA Vice President Vít Voženílek is the new liaison person to the ICA Executive Committee (EC).

The World of Maps book is freely available from the IMY homepage in English, French and Spanish with 16,500 downloads so far. Translations into Arabic, Chinese, Indonesian

and Italian are under way. During 2016, IMY will be celebrated in countries around the world with national and local map days, where school children and public will have a chance to learn more about the power of maps and how study of maps can improve our societies. Many museums and map archives are also asked to set up map exhibitions. So far some 30 countries have announced their participation, but more are needed.

All national IMY contact persons will be asked to report on their activities (in English) by December 2016. These reports will then be used for the preparation of a final IMY report, which hopefully be officially presented at the opening session of ICC 2017 in Washington D.C., USA, with a copy going to the UN-GGIM. There is a plan for a research paper on IMY to be published in the *International Journal of Cartography* during 2017.

Both, Georg Gartner and the current ICA President Menno-Jan Kraak are great supporters of IMY. During a recent meeting of the ICA Commission and Working Group chairs and the EC organised in Vienna, 8-9 November 2015,

President Kraak asked all participants to actively support IMY. Mapping each of the UN 17 sustainability goals with contributions from each ICA Commission was discussed (see President's report on page 2 for details). That would be a great achievement for the International Map Year initiative.

Bengt Rystedt | Chair | ICA Working Group on International Map Year | *Sweden* ●

Bengt Rystedt addresses the audience at the launch of the International Map Year | *Photography ICC 2015*



marianna serebryakova



A map to me was and will always be a piece of art. As a child, I was attracted to all the maps and atlases I came across. What first drew my attention was the visual

impact of the colours and design. I vividly remember the moment I saw the first shaded relief at a lecture. Enchanted by its beauty, I discovered various dedicated sources on the web, which enhanced my desire to learn every aspect of its creation. At the same time, I discovered a love for mountains, though I lived far from any high altitude region. I must have inherited this passion from my ancestors. And it was in Switzerland where I first saw the mountains!

From that moment on most of my study projects were devoted to shaded relief and mountains. When studying in Moscow I was more into drawing and manual relief shading, which still remain my passion; however over the course of my Master thesis at the ETH Zurich I learned and tried to find a way to enhance analytically produced reliefs.

I am very lucky to be currently working on the new version of the Atlas of Switzerland. This remarkable work brings me a lot of ideas and encourages my aspiration to add an artistic touch to every map I am working on.

Marianna Serebryakova | Institute of Cartography and Geoinformation | ETH Zurich | Switzerland | mserebry@ethz.ch



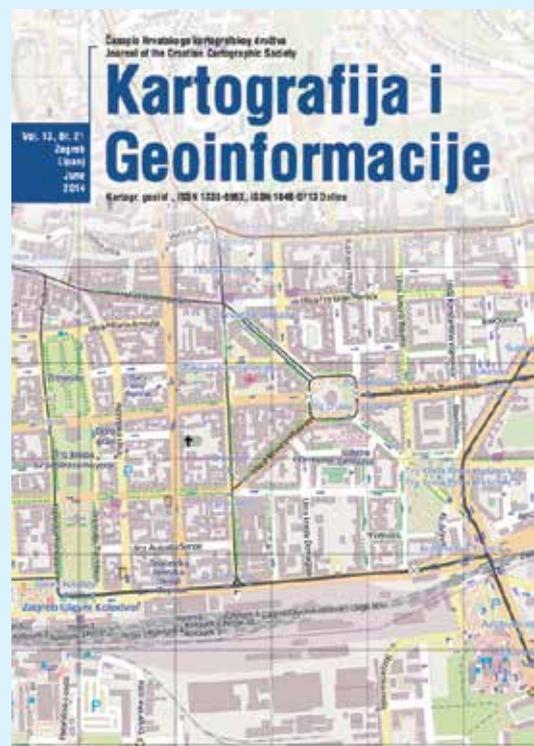
Mountainous landscape of Biasca area in the Canton of Ticino, Switzerland. This analytical relief shading, generated in ArcGIS with aerial perspective effect calculated within watersheds (subject of my Masters research), has been complemented with changes of the light direction by Fabio Veronesi (ETH Zurich).

kig.kartografija.hr

Cartography and Geoinformation journal (*Kartografija i Geoinformacije*, KiG) is published by the Croatian Cartographic Society, both in English and Croatian. Between 2002 and 2005 the journal was published annually, and from 2006 the publication cycle change to two issues per year. KiG publishes scientific and professional papers on cartography and covers other fields, i.e. geography, geodesy, geology, forestry, agronomy, history, architecture, pedagogy, etc, as long as they reference or relate to cartography and geoinformation. In addition to scientific and professional papers, the journal publishes reviews, news and announcements to popularise cartography and geoinformation.

Scientific and professional papers are subject to a double blind review process, where reviewers are active experts (principally with a PhD degree) who work in the research area related to the theme of a submitted paper. The list of reviewers is published in the journal once a year in the December issue. The authors and reviewers receive no remuneration for their work.

Cartography and Geoinformation is an open access journal, providing immediate and free access to its content based on the principle of fostering a greater global exchange of knowledge, particularly through its research articles and reports. KiG is cited in Bibliographia Cartographica, Scopus, DOAJ (under the journal title *Cartography and Geoinformation*) and Geophoka. The journal is available online (alternative address: hrcak.srce.hr/kig) and printed in full colour on high quality glossy paper. By publishing papers which contain new knowledge in cartography and geoinformation,



Recent cover of the *Cartography and Geoinformation* journal

regardless of whether they are about the application of latest discoveries and modern technologies or historical research, the *Cartography and Geoinformation* journal wishes to contribute to the development of cartography, its promotion and widespread use of geoinformation.

Dražen Tutić | Editor-in-Chief | *Kartografija i Geoinformacije* | Croatia

profiles united states geological survey

www.usgs.gov

This year, the U.S. Geological Survey (USGS) celebrates 136 years of providing the United States with reliable scientific information used to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, ecosystem, energy and mineral resources; and enhance and protect quality of life.

The National Geospatial Program (NGP) within the USGS provides the digital geospatial foundation for the Nation as the National Mapping Organization for the U.S. These data, including all historical USGS topographic maps, are accessed through *The National Map*, a free, interactive, map-based application from which the world can download geospatial data and map products directly, or incorporate those products into their own applications through a variety of Web map services (ngmdb.usgs.gov/maps/topoview/). NGP not only acquires and manages geospatial data, but also conducts quality control and assessment prior to publishing and delivering high quality products to the public characterizing the Nation's topography, natural landscape, and built environment. Federal, State, Local, and Tribal governments as well as the private sector incorporate these data and maps into their business activities and applications to make more informed decisions.

Data, including topographic and image-based maps, acquired through the National Geospatial Program and available in *The National Map* enable a diverse array of applications including understanding seismic and landslide hazards and forecasting floods, analyzing and mitigating



An image of the TopoView on a handheld device accessing the USGS historical map archive | Image courtesy of USGS

coastal erosion and storm surge, improving aviation safety, enabling precision agriculture and conservation, water quality analyses, assessments of water quantity, and improved estimates of water usage. Topographic maps produced by NGP are essential for scientific fieldwork, and provide a base onto which geologic and other scientific data can be

overlain and referenced.

The USGS affiliate membership in the International Cartographic Association supports the USGS operational and research missions in cartography.

Michael Tischler | United States Geological Survey
| USA ●

ica news 25 years ago...

ICA is truly a global organisation with national and affiliate members spread all over the world. Recognising the importance of our membership, ICA Presidents are always keen on maintaining strong links with national and affiliate members. Their visits to member countries are one manifestation of this commitment – such as President Taylor's visit to Japan 25 years ago...

Igor Drecki | Editor ICA News | ICA ●

ICA Newsletter, No 16, October 1990

ICA President's Visits to Member Countries in 1990

[...]

JAPAN

Professor D.R. Fraser Taylor, ICA President, visited Japan on the invitation of the Japan Cartographers

Association (JCA) from 7 to 14 April, 1990, on his way to attend an Executive Committee Meeting in Wuhan, People's Republic of China. The President met Mr. Masayoshi Takasaki, JCA President, and gave a lecture entitled "Cartography into 21st Century" to the membership of the Japan Cartographers Association. The paper will be published in *Map*, the official publication of the Association [see *ICA News*, No 63, December 2014, p 6, for journal's profile], together with a translation into Japanese. Professor Taylor also visited the Geographical Survey Institute in Tsukuba Science City, the Hydrographic Department, the Japan Map Center as well as Sawara City, famous as a unique *Town of the Map*. Cherry blossom in full bloom in the Nikko National Park added greatly to what was a most enjoyable, rewarding and instructive visit.

Dr. Tositomo Kanakubo, Managing Director, Japan Map Center / 5 June 1990

[...]



(left to right) Mr. Masayoshi Takasaki, President of the Japan Cartographers Association, Prof. D.R.F. Taylor, President of the ICA, Prof. Osamu Nishikawa, Professor of the Risho University and Dr. Tositomo Kanakubo, Chairman of the National Committee for Cartography, at the Memorial Museum of Ino-Tadataka, Sawara City. Ino was the famous Japanese surveyor in the early period of 19th century.

Cartographic Heritage into the Digital

cartography.web.uth.gr/ICA-Heritage/

The New Term 2015-2019

The 16th General Assembly of ICA held in Rio de Janeiro, Brazil, August 2015, approved our Commission for another 4-year term under a new name of ICA Commission on Cartographic Heritage into the Digital, and re-elected Evangelos Livieratos as its Chair. The Commission started the new term with evaluating its theoretical background, addressing its working methods and membership structure, revisiting Terms of Reference (ToR) and developing a new website.

Theoretical Background

The Commission considers cartographic heritage as an overlap between mainstream cartography (including the study of its history and its social, geopolitical and cultural impacts) and cultural heritage (culture of the past as perceived and experienced in present). The major strength of cartographic heritage is its internationality, which broadens and enriches various groups of experts and general public alike, and digital element that multiplies and revolutionises its impact on GLAM (an internationally established acronym for Galleries, Libraries, Archives and Museums) and the society. Cartographic heritage operates in a proper 'ecosystem' (cartoheritage ecosystem), generally described by its elements – cartodiversity (all types of map and map related 2D and 3D assets) and a group of operators dealing with the provision, growth and use/reuse of cartodiversity data and metadata – called the providers, the growers and the users. Usually the providers are coming from GLAM, the growers from research and technology domains, while the users from a broad spectrum of the society and tertiary sector of the economy. The concept and context of cartoheritage ecosystem is the subject of our Commission's interests, expressed in the ToR.

Targets and Tools

The Commission's aims are:

- the promotion of the cartographic and mapping heritage as an important part of the world's cultural heritage
- the provision of access to, treatment and dissemination of cartographic heritage by using all available digital tools
- (geo)referencing and transformation of all available assets of cartographic heritage into digital form
- the advancement of innovative cooperation with strategic partners who curate and transform into digital cartographic heritage assets, analyse, interpret and promote cartographic heritage, and use and reuse car-

tographic heritage data and metadata

- publishing the results of the Commission's work and research

There are six working tools that help to address the Commission's work:

- the *Digital Approaches to Cartographic Heritage* conferences held annually since 2006
- focused workshops
- thematic tutorials
- the strategic partnership with the Map & Geoinformation Curators (MAGIC) Group on map and geoinformation curatorship
- the close cooperation with institutions supporting our Commission (we welcome any institution willing to support us in accordance with the Commission's ToR)
- publishing Commission's work in the international web journal *e-Perimtron* that focuses on science and technology affined to the history of cartography and maps

Topics and Working Units

The topics derived from ToR which are subject of the Commission's study and research are:

- digitisation, including non-planar surfaces
- georeferencing for experts and especially for non-experts
- cartodiversity analysis in terms of geometry and subject
- visualisation of cartoheritage, including thematic portals, e.g. the globe-portals
- relationship between relevant maps, texts and archival sources
- landscape change studies and relevant issues from cartoheritage map archival sources
- historical terrestrial and aerial photography, including photo related post-cards and affine material, and its cartographic parametrisation
- interaction of cartoheritage with map and geoinformation curatorship of cartodiversity
- promotion of cartoheritage as a cultural issue, within the context of GLAM, targeting education sector and the general public
- study and analysis of existing web-based cartoheritage, including their improvement
- cross-section of cartoheritage with digital humanities
- editorial and publication work based on Commission's conferences and workshops

An innovation in the Commission's work this term is the introduction of the Working Units (WU) composed of Commission members wishing to focus on a particular topic from the list above. Eight Units have already been established (see cartography.web.uth.gr/ICA-Heritage/2015-2019/pg/Units.html for details).

Conference in Riga, Latvia

The Commission's 11th Conference on *Digital Approaches to Cartographic Heritage* and the 20th MAGIC Group Conference *The One Who Wants to Last is the One Who is Willing to*



The National Library of Latvia – venue of the 11th Conference on *Digital Approaches to Cartographic Heritage*, Riga 20-22 April 2016 | Photograph courtesy of Evangelos Livieratos

Change: Old maps for new user profiles, will be held as a joint event in Riga, Latvia, between 20-22 April 2016. The event is kindly hosted by the National Library of Latvia and will follow a common but distinct working programme, with sessions dedicated to issues relevant to the Commission and the MAGIC Group. All presented papers will be published in a CD-ROM Conference Proceedings and available to all participants. Selected papers will be published in the international web journal *e-Perimtron*. For more information on the Riga Conference, please visit the following website: cartography.web.uth.gr/ICA-Heritage/Riga2016.

IMY and Future Plans

The Commission is actively participating in the International Map Year 2015-2016. It released a 50 x 70cm poster entitled *Loving Maps and the Daisy* referring to the playful relationship between the Commission's logo (a daisy-shaped map) and IMY slogan *We Love Maps*. The poster is available for download from the Commission website.

The Commission is discussing plans with relevant institutions in Italy, China and New Zealand for organising a number of ad-hoc workshops in 2016. Evangelos Livieratos, Commission Chair, is in the organising committee of the 1st International Workshop on the *Origin and Evolution of Portolan Charts*, Lisbon, Portugal, 6-7 June 2016.

Evangelos Livieratos | Chair | ICA Commission on Cartographic Heritage into the Digital | Greece ●

Cartography and Children

lazarus.elte.hu/ccc/ccc.htm

Joint Symposium in Niterói, Brazil

The Joint ICA Symposium on *Cartography beyond the Ordinary World* was an event organized within the pre-ICC 2015 activities that gathered participants from four ICA



Participants of the Joint ICA Symposium on *Cartography beyond the Ordinary World* held at Fluminense Federal University in Niterói, Brazil | Photograph courtesy of José Jesús Reyes Nuñez

Commissions:

- Cartography and Children
- Maps and Graphics for Blind and Partially Sighted People
- Planetary Cartography
- Cartography on Early Warning and Crisis Management

The two-day Symposium was held at Fluminense Federal University in Niterói, Brazil on 21-22 August 2015. The event began with a cultural surprise by the Brazilian organizers – the performance of the University Choir singing Brazilian folk songs – which was very much enjoyed by the audience. The opening performance was followed by the short address by José Jesús Reyes Nuñez, Chair of the ICA Commission on Cartography and Children, on behalf of the four participating commissions. Next, Prof Dr Wainer da Silveira e Silva, Vice-Rector of the host institution, officially opened the event. He was followed by a keynote address by Prof László Zentai, ICA Secretary General, entitled *Cartography 2.0 - are we there?*

The first session of the event was dedicated to Planetary Cartography, which introduced a new extra-terrestrial geographical application called *Country Movers* and developed by Henrik Hargitai and Mátyás Gede from Hungary. The remaining two sessions were dedicated to Cartography and Children, and Education and Maps. The day finished with an opportunity to take part in a special workshop on Cartography for Blind and Partially Sighted People organized and presented by Prof Ruth Nogueira from the Federal University of Santa Catarina (Brazil) and specialists from the Benjamin Constant Institute in Rio de Janeiro.

The second day began with a keynote by Prof Milan Konečný on Cartography on Early Warning and Crisis Management. His address served as an introduction to the first session of the day dedicated to the same theme, with presentations by colleagues from Switzerland, Brazil and China. During the coffee break a poster session took place in the area outside the Symposium building, where authors had the opportunity to answer questions relating to their research. After the coffee break, the programme resumed with sessions on

Cartography for Blind and Partially Sighted People, and Cartography and Children.

A Farewell Cocktail on the roof of the building, offering a spectacular panoramic view of Guanabara Bay and Rio de Janeiro, concluded the event. The cocktail party organized by our Brazilian hosts, was followed by a walking tour to the Museum of Contemporary Art in Niterói.

The joint Symposium offered a unique opportunity for all participants to share and learn about the latest research projects undertaken during the last two years. More information about the event can be found at niteroi2015.elte.hu/.

Commission Meeting in Rio de Janeiro, Brazil

The ICA Commission on Cartography and Children had its business meeting on 25 August 2015 in the afternoon, after the activities of the second day of the ICC 2015 Conference. In the first part of the meeting, José Jesús Reyes Nuñez (Commission Chair) presented a summary of Commission activities between 2013 and 2015, including general information on membership, publications, newsletter, international relations and meetings organized within this period. This was followed by a session dedicated to the Barbara Petchenik Competition, giving some information on the 2015 event. Chair expressed an interest in involving Commission members more directly in decisions related to the Competition improvements and asking for their feedback. The last part of the meeting focused on proposals concerning activities in 2016. The first and main proposal is related to the exchange of opinions on the Barbara Petchenik Competition that already begun last June. The other proposal concerns the possible organization of a Commission meeting during the 6th International Conference on Cartography and GIS in Albena, Bulgaria, in June 2016. A call for the organization of regional meetings with specialists involved in our research topic is also on the agenda.

Jesús Reyes took this opportunity to officially “say goodbye” as Chair of the Commission, a position he held during the last eight years

(initially as Co-Chair, together with Temenoujka Bandrova, between 2007–2011). Next, Carla Sena (Brazil) introduced herself as the proposed new Chair, having served the Commission as Vice Chair during the last two years. She was nominated by the Brazilian Society of Cartography to lead the Commission in the 2015-2019 term, a proposal which was subsequently accepted by the ICA General Assembly on the last day of ICC 2015.

After the meeting, copies of the *Children Map the World: Anniversary Edition* book were distributed by two of the editors to all participants.

Barbara Petchenik Competition 2015

The international coordinators, Peter van der Krogt and Ferjan Ormeling from the Netherlands, collected 189 entries from 38 countries, which were then photographed by Peter and Rene van der Krogt and placed on the web for judging by the International Jury. A pre-selection of the best entries in each age group was made according to the votes sent by the members of Jury before ICC 2015. On 27 August the Jury met face to face to discuss the results and select the winners. They also counted the 292 votes given by the Conference delegates during the for the Public Award. The winners of the 2015 edition of the Barbara Petchenik Children's World Map Award and members of the International Jury are given on page 27.

On behalf of the ICA we would like to thank the international and national coordinators and all those colleagues and Commission members, who were directly involved in or supporting the organization of the competition worldwide. We would also like to thank all teachers who encourage and help children to draw the maps in the classrooms and offer enthusiastic guidance in the process, as well as all parents, including those who contacted us from countries where the competition is not yet organized – without them it would be impossible to enjoy the “little” cartographic masterpieces created by the children this year.

José Jesús Reyes Nuñez | Vice Chair | ICA Commission on Cartography and Children | Hungary ●

Cartography in Early Warning and Crisis Management

comcewa.geogr.muni.cz/

Commission Activities

The ICA Commission on Cartography in Early Warning and Crisis Management actively participated in the FIG Working Week 2015, *From the Wisdom of the Ages to the*



Commission Chair Milan Konečný (third from left) with some Brazilian participants of the Joint ICA Symposium in Niterói, Brazil | Photograph courtesy of Milan Konečný

Challenges of the Modern World, organised in Sofia, Bulgaria, 17-21 May 2015. M Konečný, C Sasinka and Z Sterba from Masaryk University in Brno, Czech Republic, delivered a paper *Research on usability testing and cognitive issues of cartographic visualizations in the context of different groups of users*. Another paper linked with the Commission's area of research was presented by the Bulgarian authors from the University of Architecture, Civil Engineering and Geodesy – Silvia Marinova, Temenoujka Bandrova, Mihaela Kouteva-Guentcheva and Stefan Bonchev *Thematic Mapping for Disaster Risk Assessment in Case of Earthquake*. The paper received the FIG article of the month (May 2015) award.

Prior to the International Cartographic Conference (ICC) in Rio de Janeiro, Brazil, the Commission coorganised a Joint ICA Symposium in Niterói (see the ICA Commission on Cartography and Children report on page 8 and 9 for details). On 22 August 2015, the second day of the Symposium, Commission Chair Milan Konečný chaired a session and delivered a keynote entitled *Cartography on Early Warning and Crises Management: Research Agenda*. It was very positive to see contributions from Brazil, Switzerland, Bulgaria and China presented at our session, together with several posters.

During the ICC 2015, the Commission's activities concentrated on several events organised on 26 August 2015. The first was so called fast presentation about the ICA Commission on Cartography in Early Warning and Crises Management prepared by the Chair and a candidate for the Commission Vice Chair – Mr Liu Jipping from China. The second activity was the Commission's Business Meeting during which Milan Konečný delivered a speech on *Cartography on Early Warning and Crises Management: Past, Present and Future Research Agenda*. Commission also prepared a poster highlighting its activities in the 2011-

2015 term. During the last 4 years the Commission organised more than 30 activities over the world, participated in key global initiatives linked with early warning and crisis management and cooperated with global organizations, such as ISPRS, FIG, GEOSS and ISDE, including participation in common events.

On 29 September 2015, Milan Konečný delivered a keynote address entitled *Early Warning and Crises Management in Big Data Era: Geoinformatics Challenges* during a visit to Urumqi, Xinjiang, China. He also delivered an invited paper, describing a new area of potential Commission activities entitled *Organization of the Disaster Relief and Prevention System in the European Union*, at the International Seminar on Jointly Addressing Challenges to Humanitarian Aid organised by the Chinese Academy of Governance (CAG), Beijing, China, 21-23 October 2015.

Another activity propagating Commission's work was organised on 25 October 2015 at the University of Geosciences in Beijing, China where Milan Konečný delivered a paper *Early Warning and Crises Management in Big Data Era: Geoinformatics Challenges* and invited all interested young Chinese and international scientists to follow Commission activities.

Future Plans

The Commission plans to concentrate on development of specific cartographic approaches to deal with adaptive and context-based cartography for early warning and crisis management, including real-time prognosis, modelling, cartographic visualization and presentation of disasters, investigation of specific groups of inhabitants (children, seniors, etc.) and their needs in disaster situations (see Commission website for details).

In cooperation with ICA Executive Committee and other commissions, the Commission will be contributing to the UN 17 sustainability goals effort. It also plans to respond to impulses

coming from the key Conferences on topics aligned with the Commission interests, such as the Third UN World Conference in Sendai, Japan, 18 March 2015, during which The Sendai Framework for Disaster Risk Reduction 2015-2030 was formulated.

The Commission set the following priorities for short, medium and long term activities in the 2015-2019 term:

- Priority 1: Understanding disaster risk
- Priority 2: Strengthening disaster risk governance to manage disaster risk
- Priority 3: Investing in disaster risk reduction for resilience
- Priority 4: Enhancing disaster preparedness for effective response and to *Build Back Better* in recovery, rehabilitation and reconstruction

The next activity is the traditional Commission workshop in Novosibirsk, Russia on 20-22 April 2016 at the InterExpo GeoSiberia 2016 event. This will be followed by the Early Warning and Crisis Management Seminar in Albena, Black Sea, Bulgaria during the Cartography and GIS conference, 17-21 June 2016, and a joint conference with the ICA Commission on Maps and the Internet in October 2016 in Nanjing, China.

Milan Konečný | Chair | ICA Commission on Cartography in Early Warning and Crisis Management | Czech Republic ●

Generalisation and Multiple Representation

generalisation.icaci.org/

Workshop in Rio de Janeiro, Brazil

The ICA Commission on Generalisation and Multiple Representation held a very productive 18th workshop on Friday, 21 August 2015, at the State University in Rio de Janeiro, Brazil. The workshop was jointly coordinated with the ISPRS Working Group on Multiscale n-dimensional Spatial Data Representations, Data Structures and Algorithms. Nine papers were presented at this one-day workshop regarding three topic sessions: Generalisation of Map Series & Conflation, Network Generalisation, and Ontologies, Homogenisation & Multimedia Summation.

In the first session on Generalisation of Map Series & Conflation, Marion Dumont presented work beginning at IGN France to formulate an automated generalisation workflow for producing intermediate scale maps in a multi-scale pyramid. The additional scales are intended to eliminate or reduce user confusion caused by large scale jumps between maps. Next, Dan Lee presented an overview of tools and workflows being developed by Esri to automate conflation of datasets to help keep



Participants of the ICA Workshop on Generalisation and Multiple Representation, Rio de Janeiro, Brazil | *Photograph courtesy of Larry Stanislawski*

data harmonized and up-to-date. To end the session, Anna Vetter presented a synopsis of research by Esri Switzerland, the Swiss Topographic Office, and Vienna University of Technology to develop workflows using ArcGIS Desktop tools and models for automated generalisation of building polygons from the 1:10,000-scale Swiss Topographic Landscape Model to 1:50,000-scale.

During the second session on Network Generalisation, Peter van Oosterom from Delft University in the Netherlands presented research collaborating with Radan Šuba and Martijn Meijers. Their work develops automated methods to generalise large scale polygonal road features to smaller scales by progressively collapsing the more significant polygon features to linear features while generalising to smaller and smaller scales. Ling Zhang of Nanjing University, China presented research with Eric Guilbert of Laval University, Canada to automatically subdivide drainage networks and identify drainage patterns. Their methods assist terrain classification and tailor generalisation operations for terrain or drainage network conditions. Last in this session, Larry Stanislawski presented preliminary research by United States Geological Survey (USGS) evaluating scale-dependent geometric characteristics of linear hydrographic features with respect to stream geomorphology in the conterminous United States. Through collaboration with Barbara Buttenfield of University of Colorado-Boulder and Paulo Raposo of Pennsylvania State University, the team is developing generalisation rules to render multiscale hydrographic representations that maintain natural drainage variations reflective of geomorphological conditions.

In the last session on Ontologies, Homogenization & Multimedia Summation, Eric Guilbert of Laval University presented concepts and a framework for ontology design patterns for landform representations, which could assist users with generation and interpretation of map

information. Bernard Moulin from Laval University is collaborating on this work. Next, Monika Sester presented research being done with Richard Guercke of Leibniz University Hannover to promote homogenization as a new generalisation operator, and demonstrate homogenization of building facades. Homogenization can reduce storage size and complexity of a dataset. The last presentation of the workshop was by Guillaume Touya who compared generalisation techniques with text summarization techniques intending to find summarization concepts that may assist cartographic generalisation. From this work, Touya noted that generalisation could benefit from the following: machine learning techniques; thorough definitions of importance, saliency and redundancy concepts; and more focus on generalisation assessment techniques with benchmark data.

In addition to the technical sessions, two short breakout sessions were coordinated to discuss important topics for future work. One group discussed the use of ontologies in a framework for automated mapping and generalisation. Discussion began with an overview of the workshop held on 26-27 March 2015 in Paris regarding ontologies for generalisation and on-demand mapping. A common initiative is working towards a common generalisation ontology *GeneProcessOnto* available at web Protégé server (webprotége.stanford.edu). Interested research groups and developer are invited to cooperate. The other group discussed research challenges in the next five years. Topics deemed important included managing and visualising big data, delivering knowledge and conditional parameterisations of generalisation to non-experts, 3D generalisation, conflation for change detection and database updates, incremental generalisation updates for map production, annotation generalisation, and harmonising data and generalisation results across jurisdictional boundaries.

The venue for the next meeting of the ICA Commission on Generalisation and Multiple Representation is the 2nd ICA / EuroSDR NMA Symposium *Designing MRDB and multi-scale DCMs: Sharing experiences between mapping agencies and the outside world*, 3-4 December 2015 in Amsterdam. The 19th ICA Workshop on Generalisation and Multiple Representation is planned to be held in Helsinki in association with the AGILE-conference in June 2016.

Larry Stanislawski | ICA Commission on Generalisation and Multiple Representation | USA ●

History of Cartography

www.icahistcarto.org/

Symposium in Dubrovnik, Croatia

Three ICA Commissions, i.e. on History of Cartography, Map Production and Geoinformation Management, and Use, User and Usability Issues, and the Institute of Social Sciences *Ivo Pilar* from Zagreb, Croatia, are organizing the 6th International Symposium on *The Dissemination of Cartographic Knowledge: Production – Trade – Consumption – Preservation*. The joint event is planned for 13-14 October 2016 in Dubrovnik, Croatia, the medieval port city on the coast of the Adriatic and UNESCO World Heritage Site. The symposium and planned optional excursions are open to cartographers, geographers, historians, map collectors, academics and everyone with an interest in the diverse aspects of the history of cartography.

For more information, please refer to symposium's website www.histacartodubrovnik2016.com, which also includes details on registration, programme, transportation and accommodation.

Imre Josef Demhardt | Chair | ICA Commission on the History of Cartography | USA ●

Location Based Services

lbs.icaci.org/

Introduction

On 28 August 2015, the 16th ICA General Assembly in Rio de Janeiro approved a new research commission on Location Based Services (LBS) for the term of 2015-2019. The Commission aims to provide a platform for anyone whose work is either focused on or relevant to LBS, to interact and exchange knowledge, experience and ideas on how LBS can be improved, and how it will influence both science and society.

LBS is an interdisciplinary research field. The Commission is interested in any research topics related to LBS, including (without being



Participants of LBS 2015 in Augsburg, Germany | Photograph courtesy of Jukka M Krisp

limited to) outdoor and indoor positioning, context and user modelling, location tracking and processing, user interfaces, usability, privacy and social issues, smart cities, mobility and transportation applications, and health applications. Anyone who is interested in LBS can sign up at the Commission website, become a member and receive news and updates through the Commission's moderated mailing list.

Symposium in Augsburg, Germany

The 12th International Symposium on Location Based Services was held in Augsburg, Germany, from 16–18 September 2015. It was addressed at researchers, industry operators and students of different backgrounds (scientific, engineering and humanistic) whose work is either focused on or affined to LBS. The conference featured Alexander Zipf from Heidelberg University and Xiaolin Meng from University of Nottingham as keynote speakers. An overview of the program can be found on www.lbs2015.tum.de. Selected papers are planned to be published in the *Journal of Location Based Services*.

Future Plans

Several activities have been planned for the coming year:

- We will organize the 13th International Conference on Location Based Services (LBS 2016) in Vienna, Austria in November 2016; during the event, we plan to organize a pre-conference workshop to discuss the scientific vision and research agenda of LBS and the results will be published in a special issue of the *Journal of Location Based Services*.
- A special issue on *Location Based Services* of the ISPRS *International Journal of Geo-Information (IJGI)* is planned for 2016; this special issue aims to provide a general research activities related to LBS and the submission deadline is 30 June 2016 – for

more details, please visit www.mdpi.com/journal/ijgi/special_issues/LBS.

- A special session on *LBS and Ubiquitous Cartography* will be organized at the ISPRS Congress in Prague, Czech Republic in July 2016.

Haosheng Huang and Jukka M Krisp | Chair / Vice Chair | ICA Commission on Location Based Services | Austria / Germany ●

Map Design

mapdesign.icaci.org

Commission Activities

The ICA Commission on Map Design co-organised (with the ICA Commissions on Cognitive Visualisation, Use and User Issues and GeoVisualization) a very successful ICC 2015 pre-conference meeting in Curitiba, Brazil, 21 August 2015, to explore new agendas for cartographic research in the broad areas of the Commission's interests. Participants enjoyed a stimulating day of discussions and debates as we looked at how we might shape research going forward. There were a number of useful strands explored and tangible outputs already in preparation. Follow-up meetings are scheduled for 2016 and papers are planned.

The Commission was approved for a second term at the ICA General Assembly in Rio de Janeiro in August. Kenneth Field (UK, Esri Inc) was re-elected as Chair alongside new Vice-Chairs Ian Muehlenhaus (USA, University of Wisconsin - Madison) and Damien Saunder (Australia, Esri Inc). The business meeting in Rio allowed the organisers to set out their vision for the plan of work for the next four years, much of which is already underway including a major new cartography text book by Field and Saunder.

The Commission was privileged to become a key component of the International Cartographic Exhibition in Rio with Chair Kenneth Field

leading a committee of judges selected by ICA and the Local Organising Committee. There were some truly outstanding maps and cartographic products on display which made the judging both interesting and competitive. The Commission will look to help drive the exhibition and competition forward over the next two International Cartographic Conferences in Washington (2017) and Tokyo (2019).

Many of the Commission's members were in Minneapolis, US for the North American Cartographic Information Society (NACIS) conference in October and contributed to the programme for both Practical Cartography Day and the main conference.

The Commission's web site still hosts the *MapCarte* daily blog from 2014 and is adding to the examples with an occasional new *MapCarte* blog. This will continue going forward and provide a place where we can catalog and share examples of new and interesting cartography. The Phaidon Press book *MAP* has now been published and contains about 40 entries from 2014's *MapCarte* series.

Plans are afoot for Commission members to take part in a number of activities over the course of the next few months including presentations at the ICA European Symposium on Cartography and playing a part in organizing the ICA/Esri Cartographic Summit in Redlands in February 2016. We also have plans to design and develop a new series of 'style guides' to be made available via the Commission website. These will provide guidance on how to develop a particular look and feel for your maps. While we'll develop some of these ourselves we'll be looking for contributions from the wider world of cartographers and map-makers to help develop a really useful resource.

Kenneth Field | Chair | ICA Commission on Map Design | United Kingdom ●

Map Production and Geoinformation Management

mapproduction.icaci.org

Commission Activities

The 16th General Assembly of the ICA in Rio de Janeiro 2015 approved among others the Commission on Map Production and Geoinformation Management. The slight change of the Commission's name (former name – Map Production and Geobusiness) indicates an extended focus on management topics in terms of map production and spatial data handling. These additional aspects allow for a cartography-centric view on the UN global goals (www.globalgoals.org), as well as support the study of map production in context of process

management and geoinformation logistics. Our particular emphasis on bridging research, government and commercial sectors is driven by specific requirements of these domains and our cartographer's common understanding of these requirements that refer to map production. The Memorandum of Understanding (MoU) between ICA and URISA is one of the fundamentals for further activities in the commercial sector.

The Commission had an information session at the 27th International Cartographic Conference in Rio de Janeiro in August 2015. Since the information session in Rio, the Commission conducted a number of activities.

The *Hands-On Cultural Heritage Geospatial Infrastructures – a fundament for collaboration and exchange* workshop was held during the 20th International Conference on Cultural Heritage and New Technologies (www.chnt.at), 2-4 November 2015 in the City Hall of Vienna. This hands-on workshop led through the basic paradigm of the modern mapping technologies. Simple examples in a well prepared software framework, entirely based on open source components, explained the basic methods of the Web, Service-Oriented Mapping and its services, metadata management, publishing of content and the creation of Spatial Data Infrastructures. The aim was to provide an easy access to Spatial Data Infrastructures for Cultural Heritage topics and to understand their impact for management issues, as well as world-wide initiatives for geospatial infrastructure harmonisation and usage (like INSPIRE or UN-GGIM).

Commission Chair Peter Schmitz delivered a keynote lecture on *Forensic Mapping at the International Map Year 2015-2016 Celebration: Maps in research* at the University of Pretoria, Pretoria, South Africa on 6 November 2015. A presentation about the International Map Year was given at the Geo-Information Society of South Africa's meeting on 26 November 2015. It highlighted the role of maps for societal success and its importance for everyday activities.

Future Plans

2016 brings a lot of new Commission activities, with two of them are already set.

The ICA Commission on the History of Cartography invited our Commission and the ICA Commission on Use, User and Usability Issues to participate in the 6th International Symposium in Dubrovnik, Croatia, 13-14 October 2016. The event will cover themes relating to the technological and conceptual aspects of cartographic production (maps, charts, globes, atlases, educational tools), the usability of these techniques and the resulting products, the conditions of the map trade as a changing network of private enterprises and official institutions, as well as the role of diverse audiences in the creation, circulation, con-

sumption and ultimately preservation of knowledge (www.histacartodubrovnik2016.com).

We have organized an ICA Commission track at the Geomatics Indaba 2016, which will be held in Ekurhuleni, South Africa between 2-4 August 2016. The Commission will conduct its own peer reviewing of academic papers submitted to the conference. If accepted, they will be published in the *South African Journal of Geomatics*. Furthermore, authors that qualify will be contacted to contribute to one of our future Springer book projects. All interested are invited to submit a paper; please visit the Geomatics Indaba 2016 website at geomatics.org.za.

Peter Schmitz and Markus Jobst | Chair / Vice Chair | ICA Commission on Map Production and Geoinformation Management | *South Africa / Austria* ●

Maps and Graphics for Blind and Partially Sighted People

Introduction

During the General Assembly of the International Cartographic Association (ICA) in Rio de Janeiro in August 2015, Alejandra Coll Escanilla was confirmed Chair of the ICA Commission on Maps and Graphics for Blind and Partially Sighted People for the 2015-2019 term. The Commission, represented by Vice Chair Waldirene Ribeiro and Technical Secretary Edwin Hunt, organized and actively participated in events prior and during the ICC 2015.

Joint Symposium in Niterói, Brazil

Together with three other ICA Commissions, our Commission organized a pre-conference Joint ICA Symposium on *Cartography Beyond the Ordinary World*, 21-22 August 2015 (see the ICA Commission on Cartography and Children report on page 8 and 9 for more details). A paper entitled *The Tactile Cartography and Geography at Elementary School in the State of São Paulo* by Alejandra Coll Escanilla, Carla C R Gimenes de Sena and Bárbara Gomes Flaire Jordão was presented at the Symposium.

ICC 2015, Rio de Janeiro, Brazil

During the 27th International Cartographic Conference, our Commission prepared a poster *Experience with Tactile Maps: Towards a standardization of tactile symbols*, authored by Alejandra Coll Escanilla and Waldirene Ribeiro. At one of the *ICA at a Glance* plenary sessions devoted to ICA Commissions reports, Edwin Hunt presented a summary of our main achievements over the last four years and our

plans for the 2015-2019 term. In addition, the Commission chaired a session on *Mapping and Spatial Awareness for Disabled People*.

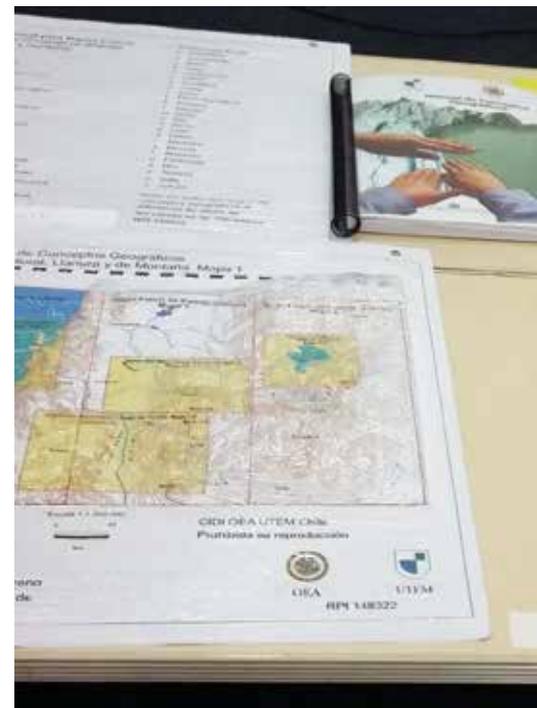
The Commission business meeting gathered participants from all over the world interested in the issues of handicapped people and the relevance of cartography in these topics. The Commission representatives also attended, as invited guests, the business meeting of the Commission on Cartography and Children.

The Commission visited the Benjamin Constant Institute (IBC), the first-ever school for blind children in Brazil, which performs important work in the area of tactile cartography. This contact resulted in donating to the IBC a range of tactile maps and products exhibited as part of the Educational Cartographic Products section of the International Cartographic Exhibition by the representatives of ICC 2015 Local Organizing Committee. The donation included maps produced by the Tactile Cartography Centre Program of the UTEM from Chile, an Atlas created by the State Cartographic Agency from Poland, some tactile maps from Korea and a map of an island in France.

In the context of the International Map Year, the ICA has published a book *The World of Maps* with contributions from all over the world. Our Commission contributed Chapter 18: *Tactile Cartography: Essential for the Visually Disabled* by Alejandra Coll Escanilla and cartographer Jennifer Pinto Soto, both of Santiago, Chile.

Alejandra Coll Escanilla | Chair | ICA Commission on Maps and Graphics for Blind and Partially Sighted People | *Chile* ●

Tactile maps at the International Cartographic Exhibition, Rio de Janeiro, Brazil; these maps were later donated to IBC, a school for blind children in Brazil | *Photograph courtesy of Alejandra Coll Escanilla*



Mountain Cartography

www.mountaincartography.org/

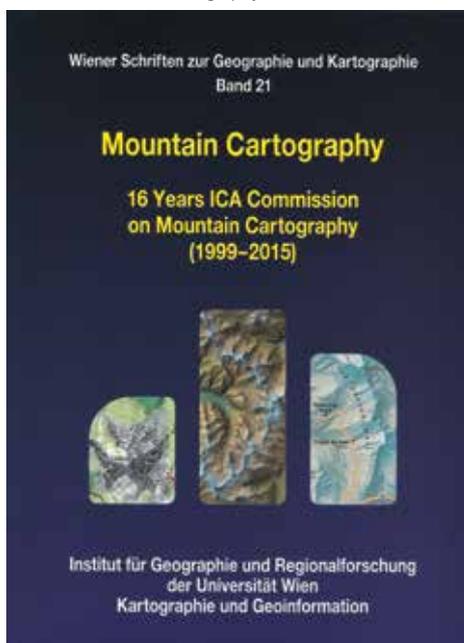
Introduction

The ICA Commission on Mountain Cartography, now in its 16th year, continues to be active through a series of biennial Workshops held in mountain venues worldwide, contributions to scientific journals, and paper sessions at every International Cartographic Conference (ICC). A major goal of the Commission is fostering the theoretical and practical aspects of cartography in mountain regions by bringing together researchers and map makers to share ideas.

The Commission celebrated a major milestone this year with the publication of a book about its activities during the past 16 years. Written by the Commission's members, the chapters cover research activities at various institutions and countries, and discussions of specific mountain maps. It also gives a chronological synopsis of the Commission workshops, which started in the Alps, then moved to the Pyrenees, the Cascade Range, back to the Alps (twice), the Carpathian Mountains, the Central Plateau in New Zealand, and the Canadian Rockies. These nine workshops have allowed regular participants to establish valuable professional relationships.

The first 16 years of the Commission were strongly influenced by its founders – Prof Lorenz Hurni and Prof Karel Kriz, who both served as Chairs and Vice Chairs of the Commission. At the ICA General Assembly held in Rio de Janeiro in August 2015, the Commission was approved for another four years with only minor changes to its Terms of Reference. Dušan Petrovič from the University of Ljubljana in Slovenia was elected Chair while

Mountain Cartography: 16 Years ICA Commission on Mountain Cartography (1999-2015) book cover



Tom Patterson from the US National Park Service, USA, serves as the current Vice Chair. The biennial workshops will remain the focus of the Commission activities.

Future Plans

In 2016, the Commission will hold the 10th Jubilee Workshop from 26 to 30 April. The venue is Carl von Stahl Haus located near the Austro-German border and adjacent to Berchtesgaden Alps National Park. The theme of the Workshop is *Unbounded Mapping of Mountains*, but all topics related to mountain cartography are welcome for submission. The workshop will entail three days of cartographic collaboration in mountain landscape, plus an optional post-workshop excursion. Looking to grow our ranks, we hope to offer travel grants to four young scientists to participate in the workshop. An important topic to be discussed at the workshop will be the preparation of a poster focusing on mountain cartography to support the UN-defined Sustainable Development Goal 13: *Take urgent action to combat climate change and its impacts*.

Dušan Petrovič | Chair | ICA Commission on Mountain Cartography | *Slovenia* ●

Sensor-driven Mapping

pilots.uwaterloo.ca/mobile-mapping/ica-commission/

Commission Activities

Dr Jan Feranec, Commission Vice Chair is leading a book project. The book entitled *European Landscape Dynamics - CORINE Land Cover Data* is at proofing stage and will be published by the CRC Press, Taylor & Francis Group in 2016. This book brings together three unique pan-European datasets to demonstrate the methods of identification, analysis and assessment of the European land cover and its changes that took place in intervals 1990, 2000, 2006 and 2012. Additionally, it discusses the future of CLC data generation. In addition, Commission Chairs have been engaged in editorships, including *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, associate editors (Jonathan and Yifang), *IEEE Transactions on Intelligent Transportation Systems*, associate editor (Jonathan), *International Journal of Cartography*, editorial board (Jonathan), *ISPRS Journal of Photogrammetry and Remote Sensing* Theme Issue on Global Land Cover Mapping, guest editor (Yifang), *IEEE Journal on Selected Topics in Applied Earth Observations and Remote Sensing* Special Issue on Multitemporal Remote Sensing, guest editor (Yifang), and Springer book *Monitoring and Modeling of Global*

Change: A Geomatics Perspective, co-editor (Jonathan and Xiaojun Yang, former Commission Chair).

As already announced before (see *ICA News*, No 64, June 2015, p 17), the Commission jointly organized the 5th International Conference on Earth Observation for Global Changes (EOGC 2015) and the 7th International Conference on Geo-information Technologies for Natural Disaster Management (GiT4NDM 2015) at the United Arab Emirates University, Al-Ain, UAE, December 8-10, 2015. This event (conferences.uaeu.ac.ae/eogc-git4ndm/en/), has attracted more than 200 submissions from over 20 countries. Prof Jonathan Li, the Commission Chair, served as the Conference Co-Chair and Chair of the Scientific Committee. The Commission will be engaged in this biennial event in 2017 and 2019. The Commission was also involved in the 9th International Symposium on Mobile Mapping Technology (MMT2015, www.mmt2015.org), 9-11 December 2015, Sydney, Australia. Prof Li served on the Scientific Committee.

Prof Yifang Ban, Commission Vice Chair served on the Scientific Committee and Session Chair of the ESA conference *Mapping Urban Areas from Space* at ESRIN in Frascati, Italy during 4-5 November 2015. Prof Ban was also involved in the Advanced Training Course on Land Remote Sensing held in Tianjin, China during 16-21 November 2015 within ESA and Chinese Ministry of Science and Technology Dragon 3 Cooperation.

The Commission will continue the partnerships with ISPRS, FIG and IAG for supporting this biennial event in the upcoming 2017 and 2019. In addition, the Commission plans to continue collaboration with the working groups from ISPRS, IEEE GRSS and EARSel to jointly organize workshops and special sessions during the events of ICA, IEEE, ISPRS and EARSel.

The Commission is calling for new members; if you are interested in becoming a member, please send the Commission Chair (junli@uwaterloo.ca) an email with your detailed contact information.

Jonathan Li | Chair | ICA Commission on Sensor-driven Mapping | *Canada* ●

Spatial Data Infrastructures and Standards

sdstandards.icaci.org/

Commission Activities

In the week before the 27th International Cartographic Conference (ICC) 2015, a pre-conference workshop on *Spatial data infrastructures, standards, open source and open data for geospatial (SDI-Open 2015)* was held on



Participants of the SDI-Open 2015 at the Brazilian Institute of Geography and Statistics (IBGE) in Rio de Janeiro, Brazil | Photograph courtesy of Serena Coetzee

20-21 August 2015 at the Brazilian Institute of Geography and Statistics (IBGE) in Rio de Janeiro, Brazil. The workshop was jointly organized by the ICA Commission on Geoinformation Infrastructures and Standards, the ICA Commission on Open Source Geospatial Technologies and the Open Geospatial Consortium (OGC).

On the first day, workshop participants brainstormed possible future joint work between the Commissions and Silvana Camboim presented an overview of the *Geo4All* initiative. The second day was opened with a welcome by João Bosco de Azevedo from IBGE, Luis Cavalcanti Bahiana from the Brazilian NSDI, and Prof Harold Moellering, the first Chair of the then ICA Commission on Standards for the Transfer of Spatial Data and later Spatial Data Standards. The programme for the day consisted of eleven presentations about implementations of free and open source software for geospatial, geographic information standards and/or open (spatial) data in various SDIs. The submitted abstracts and papers were published in the SDI-Open 2015 Proceedings, available for download from the Commission's website.

The Commission on Geoinformation Infrastructures and Standards was renewed by the ICA General Assembly held in Rio de Janeiro for another 4-year term under the new name, ICA Commission on Spatial Data Infrastructures (SDI) and Standards, with Serena Coetzee (South Africa) as Chair and Franz-Josef Behr (Germany) as Vice Chair.

We are currently cleaning up and restructuring the website and have started working on a wiki site about standards, based on *Part C: Standards for fundamental geospatial datasets of the Guidelines of Best Practice for the Acquisition, Storage, Maintenance and Dissemination of Fundamental Geospatial Data*, which was published in 2014 as a PDF

through the Mapping Africa for Africa Initiative, a United Nations Economic Commission for Africa (UN ECA) initiative that is endorsed by the ICA. Franz-Josef Behr and his team are converting the PDF of the publication into a wiki site. This will become a valuable online resource for Commission members and others, and will be easier to maintain than a PDF. In addition the wiki can be extended by other authors to become a Body of Knowledge for the whole ICA community.

We have transferred the (old) email distribution list to the Commission's website and will communicate through the website in future. Existing members should have received a notification of registration on the new site. If you would like to become a Commission member to stay informed, please send an email with your name, affiliation and contact details to Serena Coetzee: serena.coetzee@up.ac.za.

Future Plans

A Commission meeting is planned for Europe in mid 2016. Apart from Commission meetings in Washington D.C. and Japan in 2017 and 2019 respectively, a meeting in South Africa in 2018 is taken into consideration.

Serena Coetzee and Franz-Josef Behr | Chair / Vice Chair | ICA Commission on SDI and Standards | South Africa / Germany ●

Topographic Mapping

topo.icaci.org/

Introduction

The new ICA Commission on Topographic Mapping was approved at the 16th General Assembly, held in Rio de Janeiro on 28 August 2015. Our primary aim in establishing this new

Commission is to provide a forum for those whose primary focus is the design, production and use of topographic mapping and related geospatial data products. In particular, we intend to facilitate the sharing of best practice in how producers of topographic mapping can better serve the interests of their users in an environment of changing methods of production and dissemination (e.g. from crowd-sourced design to geoportals to print-on-demand). While topographic mapping is no longer the sole preserve of state-run institutions, we see the Commission as providing a much-needed interface between national mapping organisations and the international research community by identifying areas of collaboration and establishing links that foster the development and publication of product-focussed research. The leadership of the Commission brings together considerable academic and industrial expertise, with Alexander Kent, of Canterbury Christ Church University, United Kingdom, and also President of the British Cartographic Society as Chair, and Anja Hopfstock, of the Federal Agency for Cartography and Geodesy, Germany, as Vice Chair.

Topographic mapping enjoys a rich heritage of theoretical and practical knowledge which we intend to consolidate through the creation of an online glossary, FAQ and research bibliographies. To facilitate access for research and networking, our Commission website will also provide a global reference point for information on the producers and details of topographic mapping, including contact information and their history and products.

The relevance of topographic mapping to the work of other ICA Commissions is clear and we are already working in partnership with our ICA colleagues to organise and participate in joint events. At the ICA Commissions meeting in Vienna on 8–9 November 2015, we held productive discussions with several other Commissions (such as Cognitive Issues in Geographic Information Visualization, Education and Training, Generalisation and Multiple Representation, Location Based Services, Map Production and Geoinformation Management, and Use, User and Usability Issues) that explored potential for collaboration. This was followed by a successful scoping exercise inviting Commission leaders to propose up to five topics of common interest (including, for example, automated generalisation and multi-scale representation; integration of user-generated content; selection processes for toponym placement; map projections and coordinate systems; and terrain visualization) to further inform and research collaboration and partnerships.

We are currently piloting an international symbol design exercise, the results of which will be published at the Special Sessions on Cognition, Visualization, and User Issues at the Annual Meeting of the AAG (Association

of American Geographers) in San Francisco, USA, from 29 March to 2 April 2016. We are also planning to participate in the 10th Mountain Cartography Workshop at Berchtesgaden, Germany from 26 to 30 April 2016. Looking further ahead, we are working with the Commission on the History of Cartography to plan a joint conference on Colonial mapping beyond Europe for spring 2017 and with Cognitive Issues in Geographic Information Visualization towards a pre-conference workshop on mapping and emotion at ICC 2017 in Washington D.C.

Topographic mapping underpins a considerable range of geographic data and therefore carries special relevance towards meeting the UN Sustainable Development Goals, which were discussed at the ICA meeting in Vienna as part of the ICA's activities for the International Map Year (see President's Report on page 1). In particular, the Commission on Topographic Mapping is taking the lead in the creation of a 'cartographic poster' for Sustainable Development Goal No 1: End poverty in all its forms everywhere, and is working with the Commission on Toponymy and other Commissions on this and on other goals (i.e. No 9: Build resilient infrastructure, and No 11: Make cities and human settlements inclusive, safe, resilient and sustainable).

As a new Commission, our first priority is to establish our membership and we invite you to sign up via our website for news and updates. Topographic mapping carries global significance and we are particularly keen to identify and engage with regional experts who would be willing to work with us in promoting our aims around the globe.

Alexander Kent | Chair | ICA Commission on Topographic Mapping | *United Kingdom* ●

Toponymy

www.igu-icatoponymy.org/

Introduction

The new Joint ICA-IGU Commission on Toponymy was approved by the 16th General Assembly held in Rio de Janeiro in August 2015. Its establishment was proposed by Brazil, as the continuation of the highly successful Joint ICA Working Group and IGU Commission on Toponymy that operated during the 2011-2015 term. The new Commission will continue to work with IGU according the same model as the former Working Group. ICA appointed Prof Paulo Menezes as Chair while Prof Cosimo Palagiano continues as the IGU Chair. Prof Peter Jordan was appointed Vice Chair by ICA and IGU. The Terms of Reference (ToR) of the Commission were also approved by the ICA General Assembly and are available from the ICA website (icaci.org/commissions/).

The last business meeting of the Working Group on Toponymy took place during the ICC 2015, on 25 August 2015. Participants discussed the possibility of formally including "Toponymy and Education", "unofficial, aboriginal, vernacular, historical toponyms; microtoponyms" and "dual or bilingual toponyms, exonyms" as reference terms, and how the Commission can approach these themes. Another discussion point was a proposal for drafting a research agenda based on the Commission's ToR and the form it could take (e.g. a concept book). Lastly a Commission website was discussed.

Future Plans

The Commission intends to promote at least one Symposium in the 2015-2019 term. This Symposium will be organised in March/April 2017 in Rio de Janeiro (or close proximity), Brazil. The event has the support of the Brazilian Institute of Geography and Statistics (IBGE) and the Pan American Institute of Geography and History (PAIGH).

However, the Commission will coordinate meetings and special sessions at the main ICA and IGU events, and other relevant meetings. The following meetings were chosen to be attended by the Commission:

- 29th Session of UNGEGN in Bangkok, Thailand, 25-29 April 2016
- IGU Congress in Beijing, China, 21-25 August 2016
- ICC 2017 in Washington D.C., USA, 2-7 July 2017
- IGU Regional Conference in Quebec, Canada, 6-10 August 2018
- ICC 2019 in Tokyo, Japan, July 2019

We would like to ask all colleagues to contribute to the meetings and research agendas, as well as discuss and present suggestions to our Commission.

Paulo Menezes, Cosimo Palagiano and Peter Jordan | ICA Chair / IGU Chair / ICA-IGU Vice Chair | Joint ICA-IGU Commission on Toponymy | *Brazil / Italy / Austria* ●

Use, User and Usability Issues

use.icaci.org/

Introduction

The new four-year term (2015-2019) of the ICA Commission on Use, User, and Usability Issues was approved by the ICA General Assembly on Friday, 28 August 2015 in Rio de Janeiro, Brazil. The slight change in the name of the Commission, adding the term 'Usability', reflects the increasing importance of user research on interactive, online, and mobile maps. This continuation is the result of hard

work of the Commission's core team and members during the past term (2011-2015). Therefore, we would like to start with a special thanks to:

- Corné van Elzakker, Commission Chair from 2007 to 2015; he is the founder of this Commission who managed to raise it to its current excellent status. At ICC 2015 in Rio de Janeiro, he received a *Diploma for Outstanding Services to ICA* (see page 4 for details), which of course includes the recognition for his 'outstanding services' to this Commission.
- Vice Chairs David Forrest and Alexander Pucher, whose engagement with the Commission made it possible to reach out to a large interested crowd with many different successful activities.
- There are too many people to thank individually for their active involvement (David Schobesberger, Jenny Harding and others), therefore we just would like to express our sincere appreciation to all Commission members – this success story of this Commission would not have been possible without your active and enthusiastic involvement!

As Corné van Elzakker mentioned in his last report (see *ICA News*, No 64, June 2015, p 19), the 'young generation' that constitute the core team is eager to look at the Commission needs with fresh eyes: Kristien Ooms (Belgium), Robert Roth (USA), Artemis Skarlatidou (UK), and Alena Vondráková (Czech Republic). We have updated our Terms of Reference (see the Commission website), outlining our goals for the next four years.

In the light of improving our website's usability, we now have a new, easy to remember URL: <http://use.icaci.org>. The old URL will still be working for some time, but please try to update your bookmarks at the earliest convenience. At the moment we are also revising the content, structure and layout of the current website, so hopefully next year we can present a new version.

Commission Activities

Prior to the ICC 2015, the Commission (together with other ICA Commissions) was involved in the organisation of two workshops that took place in Curitiba, Brazil: *How to design and conduct user studies* and *Envisioning the future of cartographic research*. They both turned out to be a great success with many international and local participants attending. The Commission wishes to thank the local organisers Claudia Robbi Sluter and Luciene Delazari for the excellent organization and warm welcome we received at the workshops. During the ICC 2015, we were happy to see many like-minded researchers in the different 'user' sessions.



Participants of the joint workshop *How to design and conduct user studies* (left) and a discussion session during the joint workshop *Envisioning the future of cartographic research*, both workshops took place in Curitiba, Brazil, prior to ICC 2015 | Photography Philippe De Maeyer / Kristien Ooms

Future Plans

Our schedule for 2016 is filling up nicely! Here are upcoming events in which our Commission is involved:

- Special sessions on Cognition, Visualization, and User Issues are organised at the AAG, which takes place in San Francisco, USA, 29 March – 2 April 2016; these sessions are a collaboration between the ICA Commissions on Cognitive Issues in Geographic Information Visualization, Visual Analytics, and Use, User, and Usability Issues.
- We plan to continue with our series of training workshops on *Conducting and Designing User Studies*; the next one will be organised in Albena, Bulgaria during the International Conference on Cartography and GIS (iccgis2016.cartography-gis.com). The workshop will take place on Thursday, 16 June 2016 and we would like to give you the

opportunity to decide on its content. If you have any pressing questions regarding how to conduct user research in GIS and Cartography, methods or techniques you would like to see demonstrated, etc., please let us know by contacting Kristien Ooms (kristien.ooms@ugent.be) with your proposals and we will gradually fill in the program according to your needs (for more information, please visit the Commission website).

- Three ICA Commissions (the History of Cartography; Map Production and Geoinformation Management, and Use, User and Usability Issues) and the Institute of Social Sciences “Ivo Pilar” (Zagreb, Croatia) are organising a joint conference in Dubrovnik, Croatia, 13-14 October 2016 (see the ICA Commission on the History of Cartography report on page 11 for details).

In conclusion, we would like to remind that this Commission operates to serve the needs of its members. Thus, if you have proposals on other activities that should take place during this new term, please let us know. We are happy to consider any and all suggestions.

As we received many positive reactions from our Commission members regarding how our mailing list operates, we intend to keep using it in its current format. If you are interested in the Commission’s work, please send us your details and we will add them to the mailing list, so you can receive up-to-date information.

With this, we hope you appreciate that the new core team has every intention to make the most out of the coming term and extend further the success of the Commission and its members.

Kristien Ooms | Chair | ICA Commission on Use, User and Usability Issues | *Belgium* ●

reports cartographic meetings and events

United Arab Emirates Celebrate IMY

Listed below are examples of activities organised by Dr Naeema Alhosani, Assistant Dean for Student Affairs and Assistant Professor in Cartography in the College of Humanities and Social Sciences (CHSS), United Arab Emirates University (UAEU), as part of the International Map Year (IMY) 2015-2016 celebrations in the United Arab Emirates (UAE). He serves as the National Coordinator for the IMY, while UAEU is affiliate member of the ICA. In fall 2015, Dr Alhosani involved a number of students attending *Principles of Cartography* and *Cartography 2* courses he coordinates by dividing them into groups and letting them develop their own ideas of how to celebrate IMY. They still plan on having more activities in the future.

The Fashion of Map Design Workshop – on 30 September 2015, Dr Alhosani delivered a workshop entitled *The Fashion of Map Design* to UAEU students. The students enjoyed the workshop and benefited from the program by actually designing a map.

We Love Maps Campaign – between 1-19 November 2015, a group of students created a range of IMY souvenirs and distributed them to all faculty members in Geography and Urban Planning departments and staff



Children of Al Qadeer Kindergarten participate in the International Map Year activities organised by the United Arab Emirates University students | Photograph courtesy of Naeema Alhosani

at CHSS, UAEU. They also informed them about the IMY initiative. All faculty members were impressed with the wonderful idea the students came up with to promote IMY.

Mosaic World Map – on 3 November 2015, a group of students drew the world map on a board and asked the UAEU audience (faculty, staff, students, external visitors) to take a small mosaic piece – either blue or brown – and stick it on the world map provided, the blue presenting



(Clockwise from top left) Hand paintings of UAE map and IMY logo; a mosaic world map made up from ceramic pieces; cupcakes displaying UAE map and IMY messages | Photograph courtesy of Naeema Alhosani

water, the brown representing the land mass. Both, Vice Chancellor of UAEU and the audience liked the idea, and were surprised about the final result of the mosaic world map. Finally, the group of students presented the mosaic map as a gift to the Dean of SHSS.

Paint Your Country – on the same day, another group of students drew the political map of the world on a board and asked the audience (faculty, staff, students, external visitors) to paint in their country of origin. In addition, the students started drawing the map of UAE or the IMY logo *We Love Maps* on people's hands by using *Henna* (a dye prepared from a plant and used in temporary body art (staining) during social and holiday celebrations).

Beyond Cartography – on 15 November 2015, a group of students invited the UAEU fellow students to attend an evening event called *Beyond Cartography*. The program included a short film on cartography and several competitions on cartography. They provided the audience with refreshments such as popcorn, juice, and water. They also distributed the IMY 2015-2016 flyer to all participants and the crafting tools they used in the cartographic competitions. The evening was full of fun and lovely prizes.

Kindergarten Visit – on the same day, another group of students visited "Al Qadeer" Kindergarten in Al Ain city to raise awareness about the IMY among the kids. The visiting program included many activities, such as asking children to play UAE map puzzles and flash cards with map images and words, to color a coloring book and to stamp their thumb in a piece of cloth which had *We Love Maps* written on it. At the end, all children were asked to take a paper with *We Love Maps* written on it and they were rewarded with a small gift.

Urban Planning Council – on 16 November 2015, a group of students visited an urban planning department of the local council in Abu Dhabi, UAE's capital and delivered a presentation there. They also made various souvenirs (cups, pens, etc.) featuring IMY logo and prepared cupcakes with various IMY messages that were distributed to the council staff. They also talked about the IMY 2015-2016 and at the conclusion of their visit presented a gift to the Head of Council.

Chocolate World Map – on 17 November 2015, a group of students organized a food court event at UAEU's entitled *Chocolate World Map*. The event included a competition of drawing a map of any country using

white and dark chocolate. At the end, the students selected the best chocolate map drawing, while the participants enjoyed the merger of chocolate and maps! During the event, the IMY 2015-2016 flyer was distributed to all participants.

Naeema Alhosani | National Representative for International Map Year | *United Arab Emirates* ●

IMY Inaugurated in New Zealand

Unfolding the Map

Unfolding the Map - The Cartography of New Zealand exhibition inaugurated the International Map Year 2015-2016 celebrations in New Zealand (natlib.govt.nz/visiting/wellington/unfolding-the-map). Officially opened on 15 October 2015 by the Minister for Internal Affairs, the Honourable Peter Dunne and the National Librarian Bill Macnaught, the exhibition explores the changing nature of New Zealand cartography from pre-European times to the present day. It features historic and contemporary maps and charts as well as examining the impact of new technology, the rise of social mapping and other factors that are transforming and challenging cartography. The exhibition is curated by Roger Smith, Vice President of the New Zealand Cartographic Society and founder of Geographx Ltd (geographx.co.nz). It is located at the National Library of New Zealand in Wellington and will remain open until September 2016 to coincide with IMY worldwide.

The exhibition offers an opportunity to learn about geographic information and the art, science and technology of how maps are made and used. It is supplemented by a selection of tools used by map-makers over the years. The five key themes explored in the display are:

- Coastal Charting
- Surveying and the Cadastre
- Resources and the Environment
- Topographic Mapping
- Tourism and Recreation

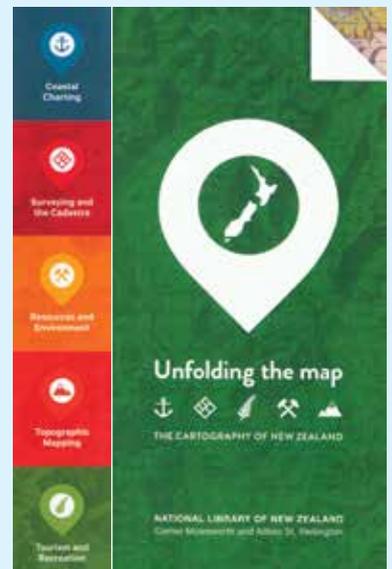
Unfolding the Map also touches on digital cartography, which is explored using a mix of projected dynamic map content, video, and ipads with access to interactive storymaps and selected webmapping applications. A large screen installed at the exhibition plays fly-through animations and 3D terrain visualisations offering a truly immersive experience of New Zealand's ever-changing landscape.

A separate display area is devoted to New Zealand place names and some of the stories behind them. Large reproductions of maps by early explorers, particularly of the remote areas of the South Island, are a true highlight of the exhibition.

Hands-on activities and a large floor map of New Zealand that can be walked on, complement the exhibition, which is a result of a collaboration between the National Library of New Zealand, Land Information New Zealand and Eagle Technology Group, with contributions made by several government and private organisations, and individuals.

Igor Drecki | New Zealand Cartographic Society | *New Zealand* ●

Graphics rendering of *Unfolding the Map* exhibition themes (left) and the cover of a promotional brochure



Book of Maps by Lithuanian Children Contributes to IMY Initiative

The fascinating world of children's imagination is unfolded in a beautiful book published by the Vilnius University and the Lithuanian Cartographic Society as part of the International Map Year 2015-2016 celebrations. From thousands of drawings, paintings and other artworks sent to the Barbara Petchenik Children map contest in Lithuania, the editors have selected the most beautiful and meaningful works.

They are presented in a form of an art album that is reminiscent of a geographic atlas. The first part of the book contains maps that are

grouped as in an atlas. i.e. from the Earth in space to particular continents, regions and countries. Then, there are chapters devoted to cartographic concepts: scale, projection, generalization, purpose and map design. Brief commentaries next to the illustrations draw reader's attention to traditional or unexpected representations of geographic phenomena, interesting design solutions, and to the social, ecological or ethnic messages conveyed by the maps. There are chapters that demonstrate different common associations of maps and humans, animals, plants and man-made objects.

The book contains 276 pages with about 250 maps created by children from 3 to 16 years of age.

Giedre Beconyte | Lithuanian Cartographic Society | Lithuania ●

A cover (left) and a selection of pages from the book of maps by Lithuanian children | Photographs courtesy of Giedre Beconyte



21st Joint Czech and Slovak Cartographic Conference

The Cartographic Societies of the Czech Republic and the Slovak Republic organised the 21st National Cartographic Conference, 2-4 September 2015. The Faculty of Horticulture of the Mendel University in Lednice, South Moravia, was chosen as a venue for this event. *All Faces of Cartography* was the conference motto and theme of the main stream of the conference.

Pleasant environment of the faculty and surrounding area and the unique environment of the cultural agricultural landscape of Lednice-Valtice, a UNESCO World Heritage Site, offered not only a place for the scientific and professional programme but also for accompanying activities. Three pre-conference workshops organised by national members of selected ICA commissions began the professional programme on Wednesday afternoon, 2 September:

- New approaches to the cartographic products evaluation
- User aspects of map production and copyright
- 80th anniversary of the Atlas of the Czechoslovak Republic

Late afternoon was devoted to outdoor activity with old maps held in the Lednice Castle Park.



(Clockwise from top) Participants of the All Faces of Cartography Conference; part of the travelling exhibition *The Magic of Old Maps*; putting together the wine cork stopper map of Czech Republic | Photography Local Organisation Committee

129 participants attended the conference programme starting on Thursday morning. Two winners of the Student and Junior Grant announced in the first conference call were also attending. 49 oral presentations and 15 posters were delivered within the main scientific and professional streams. The guest of honour was Prof László Zentai, ICA Secretary General. The

International Map Year (IMY) 2015-2016 was officially announced and celebrated with some products being displayed at the conference, and a number of future activities planned. The new ICA Vice President Vít Voženílek was officially introduced to the national members.

Some interesting examples of cartography were shown during the poster session.

One of them was a travelling exhibition *The Magic of Old Maps* consisting of 7 panels displaying old maps (www.kouzlostarychmap.cz/panely – in Czech) and prepared as part of the IMY celebrations. Another example was the map of the Czech Republic created during the conference dinner from cork stoppers.

The general assembly of the Cartographic Society of the Czech Republic took place at the conference with the main outcome being the change of the name to The Czech Cartographic Society.

The three days in Lednice confirmed that cartography is an exciting discipline with many manifestations – in production, at schools and in its utilisation.

Vaclav Talhofer | The Czech Cartographic Society | Czech Republic ●



Opening session of the first ICA European Symposium on Cartography – *EuroCarto 2015* held in Vienna, Austria | Photograph courtesy of Research Group Cartography, TU Wien

EuroCarto 2015

ICA European Symposium on CARTOGRAPHY



VIENNA, 10–12 NOVEMBER 2015

The first ICA European Symposium on Cartography – *EuroCarto 2015*, endorsed by the International Cartographic Association and the Austrian Cartographic Commission and organised by the Research Group Cartography of Technische Universität Wien (TU Wien), took place in Vienna, Austria from 10–12 November 2015.

More than 200 participants from 32 countries gathered in the historical Celebration Hall of TU Wien. The event was opened by Vice Rector Prof Kurt Matyas and Conference Director Prof Georg Gartner, followed by a keynote from the current President of the International Cartographic Association (ICA) Prof Menno-Jan Kraak. In his keynote he challenged the definition of cartography and maps and announced an ICA-led process to

Alice Rühl presenting her research at the *EuroCarto 2015* poster session | Photograph courtesy of Research Group Cartography, TU Wien



facilitate further discussions in this respect.

A total of 79 oral presentations have been given in 14 single-stream sessions over three days, demonstrating a great breadth of modern cartography. Some milestones for cartography, such as the first automatically generalized Swiss 1:50,000 topographic map, the investigation of the Ptolemaean echoes in Matteo Ricci's world map from 1602, the role of user-centred design for geoinformation products, the renaissance of the concept of Atlases, an open Point of Interest knowledge database, a proposal for using correct aspects at map projection classifications and design guidelines for using colours, symbols etc, have been presented among many other most interesting modern cartography scientific projects. The Proceedings (ISBN 978-1-907075-03-2) containing all presentations and 32 poster abstracts, are available online (eurocarto.org), together with all presentation slides. Post-conference publications are underway, including a special issue of the *International Journal of Cartography* and a book in the ICA Book Series in the *Lecture Notes on Geoinformation and Cartography*, Springer-Verlag.

Besides the technical and scientific programme the symposium provided several social opportunities including an ice-breaker reception on the first day, a conference dinner in the Esterhazy-Keller (an old and traditional Viennese wine cellar) and a farewell drinks event.

The main idea behind the *EuroCarto*¹ Symposia is somewhat based on the mission of ICA to allow for regional cartographic conferences as mainly complementary events to the

International Cartographic Conferences, and to further stimulate the promotion of scientific cartography by offering forums and platforms for exchange, discussions and presentations. The *EuroCarto 2015* can be seen as an experiment in terms of its fitting with the existing cartographic meetings and whether the all-encompassing understanding of the modern cartography domain, including aspects ranging from cartographic heritage, through cartographic modelling, cartographic fundamentals and techniques, all the way to modern application areas like LBS, SDI, Service-oriented cartography and WebMapping, is useful.

The conference feedback and the preliminary results of the ongoing questionnaire show that the participants appreciated the concept of the conference, which provided very good opportunities for scientists, researchers and developers to discuss cutting-edge research in modern cartography, exchange ideas and promote international collaboration. We would like to thank all participants for their active involvement, members of the International Scientific Committee for their critical and constructive reviews, and members of the Local Organizing Committee at TU Wien for their enormous effort.

Georg Gartner | Technische Universität Wien | Austria ●

Correction

The Editor regrets that the authorship of the *It's International Map Year all systems go!* report published in *ICA News*, No 64, June 2015, page 5, has been incorrectly attributed. The report was written by **Bengt Rystedt**, Chair of the ICA Working Group on International Map Year, Sweden. We apologise for this error. The online version of *ICA News* has already been corrected.

¹ *EuroCarto* was originally a series of scientific seminars (later conferences) held between 1981 and 1997. The first *EuroCarto* was a small scientific seminar organised in December 1981 in Oxford, United Kingdom, by David P Bickmore, under the aegis of the ICA Commission C (Computer-Assisted Cartography) and with the support of the Royal Society (mapcontext.com/autocarto/proceedings/auto-carto-5/pdf/euro-cartol.pdf).

reports ica publications committee

Journal

The major accomplishment of the International Cartographic Association's (ICA) publication activities in the 2011-2015 term was the establishment of its own journal – the *International Journal of Cartography*. The ICA Publications Committee argued that this was a detriment to the discipline as a whole, and specifically to scholars and others who wish to be recognized for their scholarly work on an international level. Further, a responsibility of organizations like the ICA is to make sure that such an outlet is available and that the resultant journal has the highest international standing.

Before proceeding with its own journal the existing journals with close relationships to ICA such as *The Cartographic Journal*, *Cartography and Geographic Information Science* and *Cartographica* have been evaluated. In the end, a decision was made by the ICA Executive Committee to pursue a subscription-based model from a major publishing house. The three largest publishers of journals, Elsevier, Springer, and Taylor & Francis, were all contacted and submitted competing proposals, with Taylor & Francis being selected. The name of the journal was set, and William Cartwright and Anne Ruas were assigned as co-editors of the journal. The first issue of the new *International Journal of Cartography*, the official journal of the International Cartographic Association was launched at the 27th International Cartographic Conference in Rio de Janeiro on Tuesday, 25 August 2015.

Book Publications

Springer remains the publisher of books for the ICA. The ICA book series is a subseries of the *Lecture Notes in Geoinformation and Cartography*. The series publishes proceedings that are peer-reviewed and published in association with ICA own or endorsed conferences and meetings, post-proceedings consisting of thoroughly revised final papers, and research monographs that may be based on individual research projects.

In addition, the series includes a number of books that represent the work of ICA commissions. Since the inauguration of the ICA book series in 2011, the following titles were published:

- *Advances in Cartography and GIScience. Volume 1 and 2; Selection from ICC 2011, Paris*: Anne Ruas (ed), 2011 ❶
- *History of Cartography; International Symposium of the ICA Commission 2010*: Elri Liebenberg and Imre Josef Demhardt (eds), 2012 ❷
- *Maps for the Future; Children, Education and Internet*: László Zentai and Jesús Reyes Nunez (eds), 2012 ❸

- *Geospatial Visualisation*: Antoni Moore and Igor Drecki (eds), 2012 ❹
 - *Cartography from Pole to Pole; Selected Contributions to the XXVth International Conference of the ICA, Dresden 2013*: Manfred Buchroithner, Nikolas Prechtel and Dirk Burghardt (eds), 2014 ❺
 - *History of Cartography; International Symposium of the ICA 2012*: Elri Liebenberg, Peter Collier and Zolt Gyozo Torok (eds), 2014 ❻
 - *Abstracting Geographic Information in a Data Rich World; Methodologies and Applications of Map Generalisation*: Dirk Burghardt, Cécile Duchene and William Mackaness (eds), 2014 ❼
 - *Cartography - Maps Connecting the World; 27th International Cartographic Conference 2015 - ICC2015*: Claudia Robbi Sluter, Carla Bernadete Madureira Cruz and Paulo Márcio Leal de Menezes (eds), 2015 ❽
 - *History of Military Cartography; 5th International Symposium of the ICA Commission on the History of Cartography, 2014*: Imre Josef Demhardt, Elri Liebenberg and Soetkin Vervust (eds), 2016 ❾
- Springer is now publishing up to 90 pages of color illustrations per book. In response to concerns raised by the Publications Committee and other parties, the price of the books has been decreased from past offerings, except for proceedings that are priced differently by Springer.

Other Publications

Books based on the ICA Barbara Petchenik Children's World Map Award have been published by the Esri Press. Through the efforts of Liu Yaolin, ICA Vice President, ICA entered in a new relationship with Sinomaps Press in China. Books based on both partnerships are in progress. It is hoped that this will lead to a new long-term relationship for the ICA Barbara Petchenik Children's World Map Award competitions.

The ICA also publishes regular columns in a number of other publications. David Fairbairn contributes a monthly column to *GIM International*, an important information source for the geomatics industry with home offices in the Netherlands. Georg Gartner contributes a column to *ArcNews*, a news magazine with a worldwide circulation of more than 600,000 that is published quarterly for those interested in mapping and GIS technology. Michael Peterson contributes a column twice a year to *Geospatial World*, a monthly magazine (formerly known as *GIS Development* magazine) that addresses current and relevant issues of the global geospatial domain.

Michael Peterson | Chair | ICA Publications Committee | USA ●



ICC 2015: Some personal views and experiences

Bom dia. An ICC in Brazil? What's not to like?

I'm here to give my impressions of the 27th International Cartographic Conference (ICC), which ran from 23rd to 28th August, 2015 in Rio de Janeiro. It was only my second ICC but the other was in Santiago, so at least I can claim 100% South American attendance. It was to be a conference of important events and beginnings as well as the customary diversity that we expect from ICC. It also brought home a thought that in conference terms we may be one coffee away from the apocalypse, but that's another story.

During the opening welcome, President Georg Gartner expressed a wish to clone himself into three so that he could attend the interesting presentations in the parallel sessions. Georg may have been underestimating – at one point on the second day I was thinking that seven of me (what a thought!) would be needed, one for each session.

As befits a discipline purporting to be the art, science and technology of making maps, the sessions taken together had a staggering breadth of scope (geovisualization, cartographic education, generalization, spatial cognition, usability, cartographic theory, data quality, cartographic history, map design, toponyms, projections, semiotics, atlases, maps for the disabled, maps for sustainable development, maps for the geosciences, crime maps, hazard maps, other thematic maps, children's maps, orienteering maps, web maps, SDI, geoservices, open source and data, art and culture, collaborative mapping, mountain mapping, hydrographic mapping, cadastral mapping, 3D cartography, ubiquitous cartography), spilling out into related topics such as spatial analysis, geodesign, remote sensing and surveying.

There are too many papers to specifically mention here, but just to mention a few from my sparse sample over the five days (maybe cloning will be in place by 2017?) we had Alan MacEachren emphasising the analysis in visual analytics, a beguiling talk on the cartography of

dreams (Cristina Iosifescu Enescu), novel twists on choropleth maps to overcome their limitations (Ken Field), effectiveness of avalanche hazard maps designed using graphic reduction (Sara Fabrikant), national geospatial policy fostering school virtual geospatial field trips (Geoff O'Malley), using local 3D geometric transforms to recreate a heritage archaeology-inspired mental map (Alexandra Koussoulakou) and the usability of SDI geoportals (Valéria Araújo). Unfortunately though, there were a number of no-shows in the sessions. This was hammered home in my own session as the only presenter out of four to turn up! A bit of a time luxury but it would have been great to have been part of the full group of papers in the session. But this doesn't take away from the general high quality of research being presented across the board at Rio.

Even five days is not enough to contain this group of topics – prior to the conference, 20 of the ICA Commissions had got together in various combinations to organise nine workshops in Rio or nearby. Before joining the Kiwi carto-enclave in Lapa, the ancient heart of the city, I was in Curitiba attending the *Envisioning the Future of Cartographic Research* workshop, co-organised by the ICA Commissions on Cognitive Visualization, Use and User Issues, Geovisualization, and Map Design. This was a really stimulating day, generating much material that will be worked on and refined in the coming months. Somewhere in social media there is a photo of incoming ICA president Menno-Jan Kraak standing on a stool, taking an aerial photograph of some assembled structured ideas on the future of cartography, arranged on a table. Like the other workshops, it was great to see some of the commissions collaborating to address multi-topic issues (another example is the *Cartography Beyond the Ordinary World* workshop in Niterói, combining Cartography and Children, Planetary Cartography, Maps and Graphics for Blind and Partially Sighted People, and Early Warning and Crisis Management map perspectives), a trend that is strong and will continue, from the evidence of the plans set out in the commission business meetings running throughout the conference.

Talking of topic diversity in cartography, you

would think an international journal to showcase the best of cartographic research would be a good thing. Well, as we all know, we now have the *International Journal of Cartography* and this conference marked its launch. This was not the only auspicious happening in Rio, as we hosted Gregory Scott from the United Nations as he introduced the new committee of experts at the UN (with ICA as key players) dedicated to global geospatial information management (UN-GGIM). This is following on from last year's inclusion of cartography as one of the 33 sciences that comprise the International Council for Science (ICSU). Last but not least, this conference marked the official start of International Map Year 2015-2016, with Georg, Gregory and IMY Working Group chair Bengt Rystedt announcing the opening in three-part harmony. As the conference played on with these important events happening, it was hard not to imagine a profound strengthening of cartography's impact on major world issues.

Talking of auspicious happenings, this ICC contained a wonderful surprise right at the beginning. During the opening ceremony we were treated to a specially commissioned song about the ICA! If your contact list includes a flautist, oboist, clarinetist, two violinists, a violist, cellist, bassist and a singer or three then you can recreate the song wherever you are – the full score is on the ICA website (icaci.org/files/documents/ICC_proceedings/ICC2015/anthem/ica-anthem_full-score.pdf). In your homes, your departments, national, regional and local cartographic conferences, this song is well worth the trouble to rustle up an orchestra for (no pressure, Washington!). Or just play the live recording on the same site (icaci.org/wp-content/uploads/2015/09/ica-anthem_live.mp3).

While we're with music, I found the ICC conference experience had a lot in common with a festival. In any conference you would expect the conference space to be divided into diverse presentation, poster, commercial etc. zones, but with ICC it is more so. You can wander around and experience a large variety of colourful and compelling areas, whether it's featuring the great artistic maps from the Children's map competition finalists or losing



yourself in the massive International Cartographic Exhibition. I'd like to single out the visually lucid and atmospheric *3D Map Longyearbyen and Environs* from Norway, which went on to win the 'paper maps' category (and was November's (2015) *Map of the Month*). I also spent an inordinate amount of time mesmerized by Manfred Buchroithner's lenticular foil map of Antarctica. Still wandering round the venue you find a room off to the side of the main exhibition space full of innovative atlases and delightful art-maps such as Chelsea Nestel's *Monsters of the United States*. And there's still the poster area and technical exhibition area, where there's always someone to talk to about their research, mapmaking or map-related products to sell. Or chill out in the Esri zone, get a free book.

As with festivals and conferences in general, the week was a great opportunity to catch up with old friends and make new ones. For New Zealand it was another opportunity to carry on the tradition of "dinner with the Norwegians" spawned many General Assemblies ago when we found ourselves on a shared table (Norvège – Nouvelle Zélande) and arranged something in between votes where we could talk of our shared love of maps, our shared monopoly of fjorder / fiords and other things.

Talking of festivals, there was no Mardi Gras but I defy you to find a better place than Copacabana Beach to wind down and reflect on a successful, diverse, colourful and auspicious ICC. Newly-elected ICA Fellow David Fairbairn (congratulations David!) reflected in the Dresden report (see *ICA News*, No 61, December 2013, p 20) that ICA conference cities can be divided into those that are compact enough to have a demonstrable cartographer presence (such was the case in 2013) and those megacities that are too big for this. No prizes for guessing which category Rio was in, but we tried really hard to make our presence felt, exploring the iconic Corcovado and Sugarloaf, Maracana stadium, the streets of Lapa and other streets, as well as the famous beaches. Thanks to the organisers, presenters, chairs, support staff, attendees and musicians. We look forward to ICC 2017 in Washington and impressions from the launch party and the cinematic trailer shown in the closing ceremony

('coming to a theater near you') suggest it will be excellent.

One more time, orchestra at the ready: "In-ter-na-tion-al-- Car-to-graph-ic—As-so-ci-a-tion- I-C-A!"

Boa noite.

Antoni Moore | New Zealand Cartographic Society | *New Zealand* ●

16th General Assembly of ICA

The 16th General Assembly of the International Cartographic Association (ICA) took place in Rio de Janeiro, Brazil, on Sunday, 23 August and Friday, 28 August 2015. ICA wishes to express its appreciation to delegates representing the ICA member nations who attended the General Assembly and took part in the important business of receiving reports of ICA officers, ICA Committees, honorary auditors and Commission Chairs for the 2011-2015 term, accepting national reports on cartographic activities from member nations, approving the financial management of our Association and confirming ICA awards bestowed by the Awards Committee. In addition, at the 28 August session, representatives of the ICA member nations voted on the location of the next General Assembly of the ICA in 2019, election of the ICA Executive Committee for the 2015-2019 term and establishment or continuation of ICA Commissions and their Chairs.

The Sunday session of the General Assembly started with the opening address by ICA President Georg Gartner who welcomed all delegates and observers. Recognition of the memory of members of the ICA community that passed away since the last General Assembly in Paris in 2011 followed, with particular mention of Nikolay Komedchikov (Russia), Isabel Suárez de Centi (Spain), Kira Shingareva (Russia) and Ramón M Lorenzo (Spain).

Prior to voting, the Executive Committee recommended two individuals to act as scrutineers for the voting. Prof Marek Baranow-

ski (Poland) and Kristoffer Johan Kristiansen (Norway) were elected by show of hands. Regrettably a number of national members have not paid their membership dues for some years. In accordance with the ICA Statutes, a proposal was tabled to revoke the voting rights of Benin, Kazakhstan, Serbia and Tanzania. The proposal was accepted by show of hands.

Voting on ICA membership included exclusions, new member nations, change of a national representative and new affiliate members. The vote on exclusion resulted in withdrawal of membership and all membership rights from the following nations: Cameroon, Ghana, Iceland, Peru, Venezuela, Vietnam and Yemen. In addition, the following affiliate members had their membership withdrawn: Polskie Przedsiębiorstwo Wydawnictw Kartograficznych (Poland) and Star-APIC Publishing Solutions (Belgium).

The unanimous vote on new member nations resulted in the election of Trinidad and Tobago as a new national member of the ICA. The vote on member nation representation resulted in a change of organisation representing Ukraine from the Ukrainian Cartographic Association to the State Service of Ukraine for Geodesy, Cartography and Cadastre. Overall the number of national members has reduced from 77 in the 2011-2015 term to 71 in the current term.

Finally, the vote on new affiliate members resulted in the following organisations being approved:

- Surveying and Spatial Sciences Institute (Australia)
- UNIGIS International Association (Austria)
- Wuda Geoinformatics Co Ltd (China)
- HERE (Germany)
- GeoTechVision (Jamaica)
- United Arab Emirates University (United Arab Emirates)

A full list of the current National Members of the ICA is given on page 24, while all current ICA Affiliate Members are listed on page 31.

The Friday, 28 August session begun with voting on ICA officers including election of the President, Secretary General and Treasurer and Vice Presidents. The vote for the position of President resulted in Prof Menno-Jan Kraak (Netherlands) being elected as ICA President and the vote for the position of Secretary > 24



Left to right

Opening Ceremony of the 27th International Cartographic Conference at the Sul América Conference Center, Rio de Janeiro, 24 August 2015 | *Photography ICC 2015*

International Jury of the Barbara Petchenik Children's World Map Awards: (back row from left) Necla Uluğtekin, Dariusz Dukaczewski, Robert Edsall and Ana María Garra; front row José Jesús Reyes Nuñez and Carla Sena | *Photograph courtesy of José Jesús Reyes Nuñez*

Performance of the ICA anthem (music by Márcio Carvalho, lyrics by Aline Milani and Jorge Tadeu) | *Photography ICC 2015*

National Members of the ICA :: 2015-2019

- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> • Algeria • Argentina • Australia • Austria • Belgium • Benin • Botswana • Brazil • Bulgaria • Canada • Chile • China • Colombia • Croatia • Cuba • Cyprus • Czech Republic • Denmark • Ecuador | <ul style="list-style-type: none"> • Finland • France • Germany • Greece • Hong Kong-China • Hungary • India • Indonesia • Iran • Ireland • Israel • Italy • Japan • Jordan • Kazakhstan • Kenya • Latvia • Lithuania • Macedonia (FYROM) | <ul style="list-style-type: none"> • Madagascar • Malaysia • Mexico • Mongolia • Montenegro • Morocco • Mozambique • Netherlands • New Zealand • Nigeria • Norway • Pakistan • Poland • Portugal • Romania • Russia • Serbia • Slovakia • Slovenia | <ul style="list-style-type: none"> • South Korea • South Africa • Spain • Sri Lanka • Sweden • Switzerland • Tanzania • Thailand • Trinidad and Tobago • Turkey • Ukraine • United Kingdom • United States of America • Uruguay |
|---|--|---|---|

71 national members

General and Treasurer resulted in Prof László Zentai (Hungary) being re-elected as ICA Secretary General and Treasurer for the 2015-2019 term.

Prior to the vote on the nominations for Vice Presidents, the President noted that it was necessary to vote on the number of Vice President positions. The ICA Executive Committee recommended a total of seven Vice Presidents for the new executive, which was consequently passed unanimously by the General Assembly.

The result of the election was that the following candidates were elected as Vice Presidents:

- Sara Irina Fabrikant (Switzerland)
- David Forrest (United Kingdom)
- Yaolin Liu (China)
- Pilar Sánchez-Ortiz Rodríguez (Spain)
- Monika Sester (Germany)
- Lynn E Usery (United States of America)
- Vít Voženilek (Czech Republic)

Georg Gartner remains on the executive as Past President. Brief profiles of the elected ICA Executive Committee members are included on page 3, and their current affiliations on page 4.

In addition, nominations had been received for two Honorary Auditors, Prof Hal Moellerling (United States of America) and Dr Swarna Subba Rao (India). Subsequently, these two

nominations were elected by show of hands.

Next, the ICA Commission proposals for 2015-2019 term were put to the vote, together with Terms of Reference and nominations for Chairs. The result of voting was that all Commissions and their Chairs were voted in. Here is the full list of the ICA Commissions and their respective Chairs:

- Art and Cartography, Chair: Sébastien Caquard (Canada)
- Atlases, Chair: René Sieber (Switzerland)
- Cartographic Heritage into the Digital, Chair: Evangelos Livieratos (Greece)
- Cartography and Children, Chair: Carla Sena (Brazil)
- Cartography in Early Warning and Crisis Management, Chair: Milan Konečný (Czech Republic)
- Cognitive Issues in Geographic Information Visualization, Chair: Amy Griffin (Australia)
- Education and Training, Chair: David Fairbairn (United Kingdom)
- Generalisation and Multiple Representations, Chair: Dirk Burghardt (Germany)
- Geospatial Analysis and Modeling, Chair: Xiaobai Angela Yao (USA)
- Geographic Information for Sustainability, Chair: Vladimir Tikunov (Russia)
- The History of Cartography, Chair: Imre Josef Demhardt (USA)

- Location Based Services, Chair: Haosheng Huang (Austria)
- Map Design, Chair: Kenneth Field (United Kingdom)
- Map Production and Geoinformation Management, Chair: Peter Schmitz (South Africa)
- Map Projections, Chair: Miljenko Lapaine (Croatia)
- Maps and Graphics for Blind and Partially Sighted People, Chair: Alejandra Coll Escanilla (Chile)
- Maps and the Internet, Chair: Rex Cammack (USA)
- Mountain Cartography, Chair: Dušan Petrovič (Slovenia)
- Open Source Geospatial Technologies, Chair: Silvana Comboim (Brazil)
- Planetary Cartography, Chair: Henrik Hargitai (Hungary)
- Spatial Data Infrastructures (SDI) and Standards, Chair: Serena Coetzee (South Africa)
- Sensor-driven Mapping, Chair: Jonathan Li (Canada)
- Topographic Mapping, Chair: Alexander Kent (United Kingdom)
- Toponymy, Chair: Paulo Menezes (Brazil)
- Ubiquitous Mapping, Chair: Masatoshi Arikawa (Japan)
- Use, User and Usability Issues, Chair: Kristien Ooms (Belgium)
- Visual Analytics, Chair: Anthony Robinson (USA)

The ICA Commission on Toponymy is jointly run with the International Geographical Union (IGU) Commission on Toponymy.

The ICA Executive Committee approved three ICA Working Groups:

- Cartography for Global Geographic Information Management
- International Map Year, Chair: Bengt Rystedt (Sweden)
- Marine Cartography, Chair: Ron Furness (Australia)

At their November 2015 meeting, the ICA Executive Committee disestablished the ICA Working Group on Cartography for Global Geographic Information Management.

The final voting in Rio de Janeiro concerned selection of the place for the 17th General



Left to right

First session of the 16th General Assembly of the International Cartographic Association in Rio de Janeiro, Brazil on Sunday, 23 August 2015 | *Photography ICC 2015*

Meeting of Young Cartographers with members of the ICA Executive Committee, 25 August 2015 | *Photography of László Zentai*

Assembly of the ICA and the 29th International Cartographic Conference. Two bids were tabled, one from Florence in Italy, the other from Tokyo in Japan. After the votes were counted, Tokyo was selected as the host city (see the announcement on page 5).

Igor Drecki | Editor ICA News | ICA

ICA Research Scholarship Recipients

In 2014, the International Cartographic Association (ICA) established the ICA Research Scholarships, a new instrument to support young scientists in advancing their research career in cartography and GIScience, and through this benefit the ICA community (see President's announcement in *ICA News*, No 63, December 2014, p 2).

The International Cartographic Conference (ICC) 2015 opening ceremony set the stage for acknowledging five recipients of the inaugural ICA Research Scholarships with official welcome by ICA President Georg Gartner and ICA Secretary General László Zentai. Listed below are all recipients, together with titles of



ICA Research Scholarship recipients (from left) Zbynek Sterba, Taien Ng-Chan, Amin Mobasher, Jiri Pánek and Merve Keskin are being congratulated by ICA President Georg Gartner (far right) and ICA Secretary General László Zentai | Photograph courtesy of László Zentai

their presentations:

- Merve Keskin, Turkey: *A Comparison of Space-Time 2D and 3D Geo-visualization*
- Amin Mobasher, Germany: (1) *Web Mapping of Geo-tagged Shipping Information – Case Study: The LLOYDS Lists*; (2) *Looking for Human Footprint in Nature: Collaborative Mapping for Monitoring of Self-organized Patterns in Human Trail Systems*; (3) *Visualizing Sidewalk Information for People with Limited Mobilities: Cartographic Challenges and Requirements*
- Taien Ng-Chan, Canada: *The Chronotope in Cartography and Montreal Cinema*
- Jiri Pánek, Czech Republic: (1) *ARAMANI –*

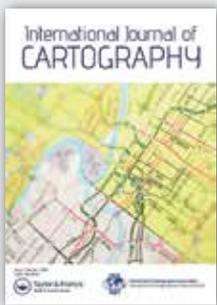
Decision-Support Tool for Selecting Optimal Participatory Mapping Method; (2) *Emotional mapping and emotional maps as tools for community based decision-making*

- Zbynek Sterba, Czech Republic: *Man-machine Interaction in Real 3D and Pseudo-3D Cartographic Visualization: A Comparative Study*

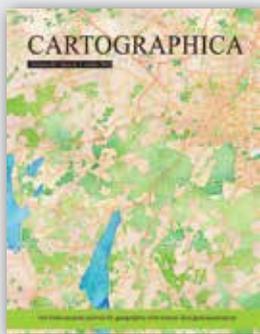
We were delighted to welcome them all to Rio de Janeiro where they actively engaged with the ICC 2015 formal programme. We look forward to following their subsequent careers in cartography with interest.

László Zentai | Secretary General & Treasurer | ICA

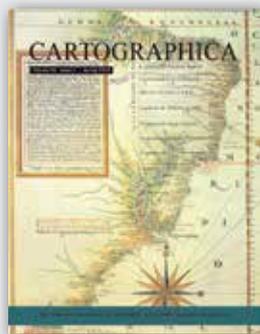
conference publications



International Journal of Cartography, Vol 1, Issue 1, 2015

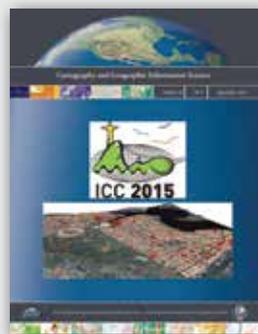


Cartographica, Vol 50, Issue 4, Winter 2015

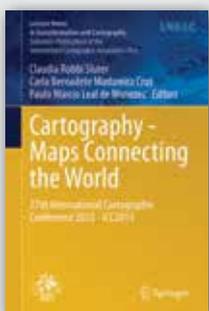


Cartographica, Vol 51, Issue 1, Spring 2016

Cartography and Geographic Information Science, Vol 42, No 4, September 2015



The Cartographic Journal, Vol 52, No 2, May 2015



Claudia Robbi Sluter, Carla Bernadete Cruz, Paulo Márcio Leal de Menezes (eds), *Cartography – Maps Connecting the World*, Springer-Verlag, Berlin Heidelberg, 2015

Cartographica plans to publish a further two issues containing three papers each from the ICC 2015: Vol 51, Issue 2, Summer 2016 and Vol 51, Issue 3, Fall 2016.

International Cartographic Exhibition catalogue



Revista Brasileira de Cartografia, Vol 67, No 5, August 2015 – online journal ([www.lsie.unb.br/rbc/index.php?journal=rbc&page=issue&path\[\]=73](http://www.lsie.unb.br/rbc/index.php?journal=rbc&page=issue&path[]=73))

ICC 2015 Proceedings (USB flash drive)



International Cartographic Exhibition

As Chair of the ICA Commission on Map Design I was honoured to be asked to lead the judging of the International Cartographic Exhibition held at the International Cartographic Conference (ICC) in Rio de Janeiro, Brazil in August 2015. The ICA Executive Committee appointed a fantastic team of judges who brought a huge collective global experience to the judging process. The judges were:

- Kenneth Field, United Kingdom (Chair)
- Derek Clarke, South Africa
- Amy Griffin, Australia
- Anja Hopstock, Germany
- Lorenz Hurni, Switzerland
- Alexander Kent, United Kingdom
- Takashi Morita, Japan
- Anthony Robinson, USA
- Vít Voženilek, Czech Republic
- João Bosco, Brazil
- Luiz Henrique Castiglione, Brazil

The categories for judging remained as they were in Dresden for ICC 2013: Paper Maps, Atlases, Digital Products, Educational Cartographic Products and Other Cartographic Products. The exhibition gathered over 400 entries in total, expressing a wide range of cartographic product and style. 35 nations and mapping organisations submitted work for the exhibition, and the judges were impressed not only by the rich variety of cartographic work but the extremely high standard. The map exhibition was set in the communal conference spaces of the Sul América Convention Center, which provided a perfect setting for delegates to explore the varied submissions during the conference breaks.

The judges spent a considerable amount of time independently examining all of the entries in each category. The criteria for judging was very simple – we were looking for cartographic excellence. Innovative styles and designs inevitably catch people's attention but innovation in and of itself is not the recipe for success. The work has to demonstrate a clear intent, match form and function with clarity and to demonstrate a mastery of cartographic practice. In short, we were looking for the very highest cartographic quality in the maps submitted. Judges met to go through the various categories and establish the top three, in order, for each. The results are listed on the right – congratulations to all winners and participants.

Kenneth Field | Chair | International Cartographic Exhibition Jury | *United Kingdom* ●

international cartographic exhibition winners

PAPER MAPS

- 1** 3D Map Longyearbyen and environs, Norway (23M1): a birds-eye view of the settlements of Longyearbyen in Svalbard using a parallel projection so scale is maintained across the map sheet; there is no vertical exaggeration yet the topography still creates a dramatic panorama, while the hillshade incorporates multiple light sources and adds hints of blue and yellow to enhance the lighting of the scene; the attention to detail is simply impressive and the detail invites to explore the map in depth – artistic cartography at its best
- 2** Panorama Map of Kanto Mountains and Mount Fuji, Japan (20M1): a panorama of the long range of the Kanto mountains, with Mt Fuji occupying the centre, depicting the landscape using an old-fashioned birds-eye view; the painted landscape appearance gives a warmth of character to the map
- 3** Occupying São Paulo – An Augmented City Map, Brazil (–): the map displays the different ways in which urban social movements occupy empty buildings in the city; the stark aesthetic of a black background and single colour red overlay contributes to the visual impact

ATLASES

- 1** The Atlas of Cultural Heritage in the Netherlands, Netherlands (21A2): cultural heritage of the Netherlands beautifully displayed using a wide range of cartographic techniques across hundreds of thematic maps and infographics; a comprehensive, detailed and high quality publication exploring a multi-faceted lens of life in the Netherlands
- 2** Graphical and Statistical Atlas of Switzerland 1914–2014, Switzerland (29A1): produced to mark the 100th anniversary of the original atlas, the style drew heavily on its heritage and presented up-to-date statistical data using a historical graphic approach
- 3** Atlas of Typical Landform in Western China, China (8A2): beautifully produced atlas with contents classified into ten categories based on landform type

DIGITAL PRODUCTS

- 1** Project Supra: Real-time Heatmaps from Sports Workouts, Finland (13D2): web application providing an innovative method of using real-time Sports Tracker information to render heat-maps on the fly; an intuitive and well thought-through digital multiscale map that presents information in a legible and accessible fashion

- 2** OV-Map, Netherlands (21D2): a well executed combination of publicly available real-time public transport data combined with best practices one might normally find in printed maps of public transport
- 3** BeCarto 14-18, Belgium (3D1): web application featuring map as a background to World War 1 thematic detail; additional information through photographs, videos and descriptions provided a comprehensive picture of events

EDUCATIONAL CARTOGRAPHIC PRODUCTS

- 1** Enjoy the map – Krkonoše Mountains, Czech Republic (12E4): extremely simple idea of using a small series of lenticular maps aimed at teaching geography and topography, well matched to the purpose; technology was used to support a very specific aim and provided a well-formed approach to supporting the development of map-reading skills
- 2** The Kakamega-Nandi Forests – a Natural Forest Cover Change Jigsaw Puzzle, Germany (16E2): an example of a participatory approach to map production as well as an interactive educational tool to educate local people in understanding the environment
- 3** Collins First Atlas, United Kingdom (32E2): a vibrant, fun starter atlas for 4-6 year olds providing a basic introduction to geography; uniquely, it begins with very local maps before moving to regions, nations and eventually global views

OTHER CARTOGRAPHIC PRODUCTS

- 1** 3D View of the Beautiful Earth, China (801): assembly of earth observation images taken from the ZY-3 satellite and presented loose-leaf in a custom binding; the uniqueness of the product is enhanced by the lenticular technology that enhances the beauty of the carefully chosen images; the pinnacle of high quality design and production
- 2** Belle-Ile: Relief Map on Demand, France-IGN (1501): the use of 3D inks to demonstrate a new solution to relief printing producing a high resolution output; the inks have excellent colour fastness and the resulting relief map is waterproof
- 3** Geological Textile, Japan (2003): a series of textile based items such as scarves and purses that feature geological maps of Japan; unique use of colours to generate abstract patterned products from the natural world

PUBLIC VOTE

- 3D View of the Beautiful Earth, China

orienteering competition results

Long Course – Female 3.1km

- 1** Olga Chesnokova | Switzerland | 31:51
- 2** Josephine Biro | Sweden | 37:59
- 3** Amanda Baumgartner | Sweden | 51:42

Long Course – Male 3.1km

- 1** Zbynek Sterba | Czech Republic | 17:20
- 2** Andreas Hall | Finland | 17:34
- 3** Gian-Reto Schaad | Switzerland | 21:04

Short Course – Female 2.0km

- 1** Marianna Serebryakova | Switzerland | 18:18
- 2** Jana Moser | Germany | 20:38

Short Course – Male 2.0km

- 1** Georg Gartner | Austria | 18:21
- 2** Kristoffer Kristiansen | Norway | 18:27
- 3** Rafael Barros | Brazil | 26:38

ICC 2015 Orienteering Event

Orienteering is the most 'cartographic' sport around and its great advantage is that different age or physical abilities are not obstacles to participate! It has developed significantly in Brazil over the last decade. However, the most suitable terrain for orienteering events in Brazil are far from the big cities; one could hardly imagine an event in a densely populated city as Rio de Janeiro. Thanks to the efforts of local organizers, ICA Vice President Paulo Menezes and ICA Secretary General László Zentai, this was not a problem and the tradition of orienteering events at the International Cartographic Conferences (ICC) successfully continued in Rio.

There were two different orienteering events offered to ICC 2015 participants. On Sunday, 23 August, a day prior to the conference opening, the Local Organizing Committee together with the Rio de Janeiro Orienteering Federation (FORJ), the Brazilian Society of Cartography (SBC) and the Physical Education Department of Federal University of Rio de Janeiro, and with the assistance of the Orienteering Club of UFRJ (COUFRJ), jointly organized the Flamengo Landfill – Competition and the ICC 2015 participants were invited to join. The mostly open area next to Guanabara Bay offered high speed running enjoyed by some participants (while others were performing their duties at the ICA General Assembly at the same time).

Three days later the official Orienteering Competition for the ICC 2015 took place at the University City on Fundão Island, in the north-eastern part of Rio de Janeiro. It was organized by Prof Rafael Silva de Barros from the Physical Education Department and Orienteering Club of Federal University of Rio de Janeiro. Following from previous conferences, the event was scheduled for Wednesday immediately after the first afternoon sessions. A bus took us to the venue, a mostly forested peninsula, with pockets of very dense vegetation, some rocks and sandy beaches (and unfortunately quite a lot of garbage).

The course offered a unique orienteering experience, where use of calibrated compass for ME global magnetic region was preferable in case of bearing running. 27 participants, including ICA President Georg Gartner and Secretary General László Zentai, tried their running and navigation skills at two courses: 3.1km and 2km. To avoid any problems within the ICA Executive Committee, the two ICA officials decided to compete on two separate courses. Georg Gartner competed in the

children's map award winners

Under 6 years old

- ▶ Adam Paketur | 5 | *I live here* | Nemenčinė | Lithuania
- ▶ Aleksandra Garkova | 5 | *The animals of the world* | Art School Akvarel: Burgas | Bulgaria
- ▶ Ruwindya Indraratne | 5 | *We'll fix the pieces to bring peace* | Colombo | Sri Lanka

6–8 years old

- ▶ Andraž Umek | 8 | *The whole world is on the same boat* | Oš Antona Martina: Slomška Vrhnika | Slovenia
- ▶ Adristi Hita Andani | 8 | *Our Earth and Pollutions* | SDK Manahan Surakarta: Surakarta | Indonesia
- ▶ Luka Huerta del Avellano and Luana Noemi Salazar Harder | 8 | *We are part of all* | Colegio Suizo de México: Cuernavaca | Mexico

9–12 years old

- ▶ Alexandra Papadopoulou, Maria Katopodi and Christina Louko | 12 | *My place in today's world through my own vision* | Special Primary School for the Blind: Kallithea | Greece – *authors of this work constructed map for the blind using methodologies learned at their special school*
- ▶ Maria Piatkowska | 12 | *Europe is my home* | Szkoła Podstawowa im. Jana Pawła II: Szczodrzykowo | Poland

- ▶ Ada Maria Ciontu | 11 | *Building bridges of peace across the world* | Bucharest | Romania

13–15 years old

- ▶ Liao Zhiyuan | 15 | *A world of lotus, a world of harmony [in Chinese, 'lotus' has similar pronunciation with 'harmony']* | Xiangtan | China
- ▶ Valentina Sturcz | 14 | *Let the music for everyone* | Fazekas Mihály Elementary and Secondary School: Budapest | Hungary
- ▶ Pan Sin Yi | 15 | *The world in our hands* | SMK St. Mary's: Kuala Lumpur | Malaysia

Public award

- ▶ Pan Sin Yi | 15 | *The world in our hands* | SMK St. Mary's: Kuala Lumpur | Malaysia

International Jury: Necla Uluğtekin (Turkey, Chair); Giedre Beconytė (Lithuania), Dariusz Dukaczewski (Poland), Robert Edsall (USA), Ana María Garra (Argentina), Angelica di Maio (Brazil), Pilar Sanchez Ortiz Rodríguez (Spain), Rumiana Vatsheva (Bulgaria) and Necla Uluğtekin (Turkey) as Chair. Substitute members were Carla Sena (Brazil) and José Jesús Reyes Nuñez (Hungary).

Thanks: Peter and René van der Krogt (the Netherlands)

▶ reproduced on the back cover

short course, consequently winning it by a mere 6 seconds ahead the second competitor. László Zentai on the other hand, competed in the longer course, where the winners came from the former national team members from Finland and Czech Republic.

Switzerland won both female categories, the long course with three participants in total and the short one with two (see left for all winners).

The ICC 2015 Orienteering event finished just before dark and all participants returned to the conference venue discussing their route choices and experiences of the race. We are now looking forward for the next ICC Orienteering event in Washington D.C. in 2017.

Dušan Petrovič | Participant of the ICC 2015 Orienteering Event | Slovenia ●

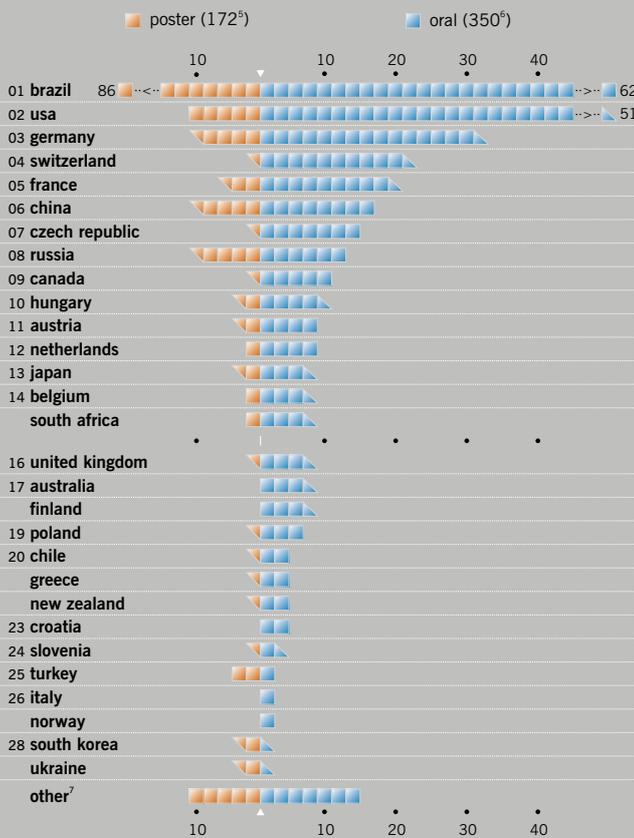
Participants of the ICC 2015 Orienteering event | Photograph courtesy of Kristoffer Kristiansen



ICC 2015 :: Facts and Figures¹

icc 2015 participants	637
full	351
senior / student	199
one day	59
accompanying persons	28
organisers / visitors / press	277
commercial exhibitors' personnel	38
participants at technical visits	75
brazilian navy hydrographic service	33
rio de janeiro city hall's operations center	22
pereira passos institute	20
meetings	48
ica commission and working group business meetings	29
other events	19
exhibits at international cartographic exhibition²	423
maps	269
atlases	48
digital products	40
digital services	8
educational cartographic products	38
other cartographic products and globes	20
maps at children's map exhibition	189
less than 6 years old	11
6-8 years old	42
9-12 years old	70
13-15 years old	66

ICC 2015 :: Origin of Presentations^{3,4}



¹ Source: Report from the 27th International Cartographic Conference (ICC 2015), Rio de Janeiro, Brazil, December 2015.

² Source: International Cartographic Exhibition catalogue, ICC 2015, Rio de Janeiro, Brazil.

³ Source: ICC 2015 Conference Program.

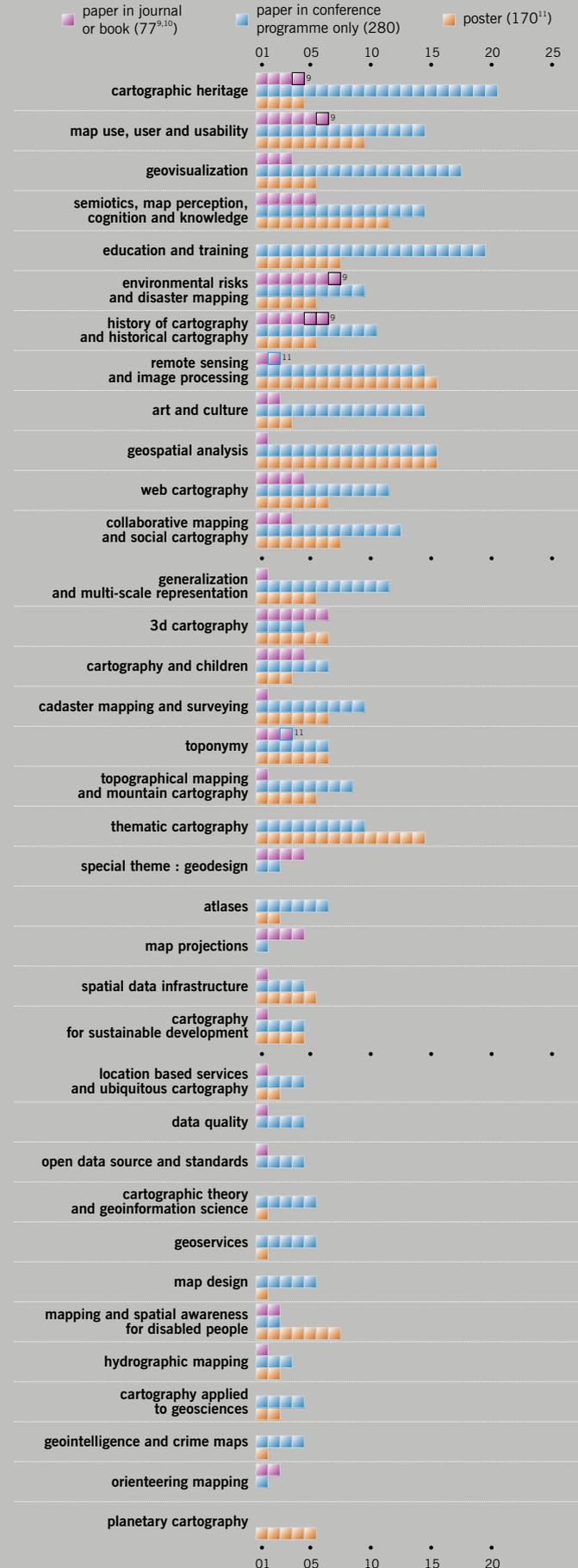
⁴ Source: ICC 2015 List of Participants.

⁵ 164 poster presentations were actually delivered at the conference.

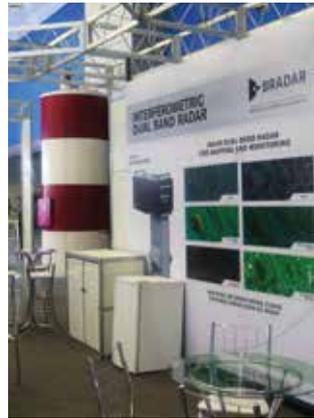
⁶ 327 oral presentations were actually delivered at the conference.

⁷ Other countries include Botswana, Israel, Romania, Saudi Arabia, Sweden (1 oral / 1 poster presentation each), Bosnia and Herzegovina, Bulgaria, Hong Kong-China, Taiwan-China, Denmark, India, Luxembourg, Singapore, Spain (1/0 each), Colombia, Egypt, Honduras, Slovakia and Tunisia (0/1 each).

ICC 2015 :: Published Papers and Posters^{3,8}



conference in pictures



⁸ Source: ICC 2015 Conference Proceedings (USB flash drive).

⁹ The number of contributions listed in the ICC 2015 Conference Proceedings is 733, while the ICC 2015 Conference Program lists 522 (350 papers and 172 posters). Out of the 211 unscheduled contributions, 5 papers were selected and published in the Conference book (2 papers) and associated journals (3 papers) – highlighted by a black outline in the graphics on left.

¹⁰ Journals: *Cartographica*, Vol 50, Issue 4, Winter 2015 (4 papers); Vol 51, Issue 1, Spring 2016 (2 papers); upcoming Vol 51, Issue 2, Summer 2016 (3 papers); upcoming Vol 51, Issue 3, Fall 2016 (3 papers);

Cartography and Geographic Information Science, Vol 42, No 4, September 2015 (4 papers); *International Journal of Cartography*, Vol 1, Issue 1, 2015 (8 papers); *Revista Brasileira de Cartografia*, Vol 67, No 5, August 2015 (15 papers); and *The Cartographic Journal*, Vol 52, No 2, May 2015 (12 papers). Book: Claudia Robbi Sluter, Carla Bernadete Madureira Cruz, Paulo Marcio Leal de Menezes (eds), *Cartography – Maps Connecting the World*, Springer-Verlag Berlin Heidelberg, 2015 (26 papers).

¹¹ 2 posters were upgraded to full papers and published in the *Revista Brasileira de Cartografia*, Vol 67, No 5, August 2015 – highlighted by a cyan outline in the graphics on left.

Photography László Zentai, José Jesús Reyes Nuñez and ICC 2015



The 28th International Cartographic Conference (ICC) will be held from 2-7 July 2017, at the Marriott Wardman Park Hotel in Washington, D.C., United States of America. The hotel venue includes onsite exhibit space to support the International Map and Chart Exhibition, the Children's Map Competition, and the Trade Exhibition with space

for lunches and coffee breaks in the Exhibition area. Adjacent to the exhibition space are the session rooms that will support all technical sessions, commission meetings, and other meeting events. At the same hotel venue, the ICC 2017 Local Organizing Committee (LOC) has reserved rooms for commission workshops for 30 June and 1 July 2017.

The LOC is organizing a series of technical, pre- and post-conference tours including ports of call at the United States Library of Congress, which houses one of the world's largest map collections; the Washington Map Society; the Smithsonian Institution, the United States Geological Survey, the United States Census Bureau, and other local and national mapping organizations. The social program will include events in the Washington, D.C. area, with several receptions and a Gala Dinner on 6 July 2017.

The LOC has contracted with the Marriott Wardman Park Hotel for exhibit space to support the International Trade Exhibition. Commercial companies, government, academic, and non-government organizations can reserve exhibit booth space at a variety of options. In addition to purchasing exhibit space, ICC 2017 also offers sponsorship classes at the Global (11,000 USD), Hemisphere (6,000 USD), and Continental



(3,300 USD) levels, which include booth space, free registrations for the conference and Gala dinner, advertising, and other amenities to support an organization's exhibit and display of its offerings.

The Marriott Wardman Park Hotel is located on the Washington, D.C. Metro Red Line at the Woodley Park/Zoo Metro stop. Much of the hotel has been renovated with some work continuing that will be complete at the time of the ICC 2017. Guest rooms will be available to attendees in the Conference Hotel at a rate of 149 USD per night including wireless network service. The location on the Red Line and near the Washington D.C. Zoo provides an excellent venue for the conference with many excellent restaurants along Connecticut Avenue near the hotel and is convenient by walking or Metro to all of Washington, D.C. including the free Smithsonian Museums, Library of Congress, and the Washington Mall with its historic monuments (see the map on left).

Travel to Washington, D.C. is via the International Airports at Dulles (IAD), the Baltimore-Washington International (BWI) airport, and National Airport near downtown D.C. supporting domestic flights. In addition the city has excellent train service along the East coast of the United States connecting with Philadelphia, New York, and Boston. Once in the D.C. area, ICC 2017 participants can move easily and safely about the city by walking, the Washington Metro subway system, busses, and taxi cabs. The LOC is working with the United States Department of State to support acquisition of visas by ICC 2017 participants. Letters of invitation will be provided for all registered attendees.

The ICC 2017 LOC extends a warm invitation to all to join us for a magnificent conference and exhibition of cartography in the Nation's capital on the 241st anniversary of United States independence.

E Lynn Usery | Conference Director | ICC 2017 Local Organising Committee | USA ●



(from left) Washington D.C. Railway Station; Marriott Wardman Park Hotel; United States Library of Congress; Smithsonian Institution



calendar

march 2016

29-02 April: AAG Special Sessions on Cognition, Visualization, and User Issues | San Francisco, California | USA | [icaci.org/call-for-participation-aag-special-sessions-on-cognition-visualization-and-user-issues/](#)

april

20-22: 11th Conference Digital Approaches to Cartographic Heritage | Riga | Latvia | [cartography.web.auth.gr/ICA-Heritage/Riga2016/](#)

25-29: 29th Session of the United Nations Group of Experts on Geographical Names (with contribution by ICA Commission on Typonymy) | Bangkok | Thailand | [unstats.un.org/unsd/geoinfo/UNGEGN/sessions.html](#)

26-30: 10th Mountain Cartography Workshop | *Unbounded Mapping of Mountains* | Berchtesgaden | Germany | [tu-dresden.de/die_tu_dresden/fakultaeten/fakultaet_forst_geo_und_hydrowissenschaften/fachrichtung_geowissenschaften/ifk/cartoWorkshop/cartoWorkshop/](#)

june

06-07: First International Workshop on the Origin and Evolution of Portolan Charts | Lisbon | Portugal | [ciuhct.org/events/portmeeting/index.htm](#)

13-17: 6th International Conference on Cartography and GIS | Albena | Bulgaria | [www.iccgis2016.cartography-gis.com/](#)

14-16: Seminar on Early Warning and Disaster / Crisis Management | Albena | Bulgaria | [www.iccgis2016.cartography-gis.com/](#)

august

31-02 September: GeoCart'2016 / 4th ICA Regional Symposium on Cartography for Australasia and Oceania | *Unfolding the Map* | Wellington | New Zealand | [geocart.cartography.org.nz/2016/](#)

october

13-14: 6th International Symposium on the History of Cartography (joint event of ICA Commissions on the History of Cartography, Map Production and Geoinformation Management, and Use, User and Usability Issues) | Dubrovnik | Croatia | [www.histacartodubrovnik2016.com/](#)

18-20: 5th International FIG Workshop on 3D Cadastres | Athens | Greece | [3dathens2016.gr/site/?page_id=23905](#)

20-21: 11th 3D Geoinfo Conference | Athens | Greece | [3dathens2016.gr/site/?page_id=24171](#)

november

14-16: 13th Conference on Location-Based Services | Vienna | Austria | [lbsconference.org/](#)

july 2017

02-07: 28th International Cartographic Conference | Washington, D.C. | USA | [www.icc2017.org/](#)

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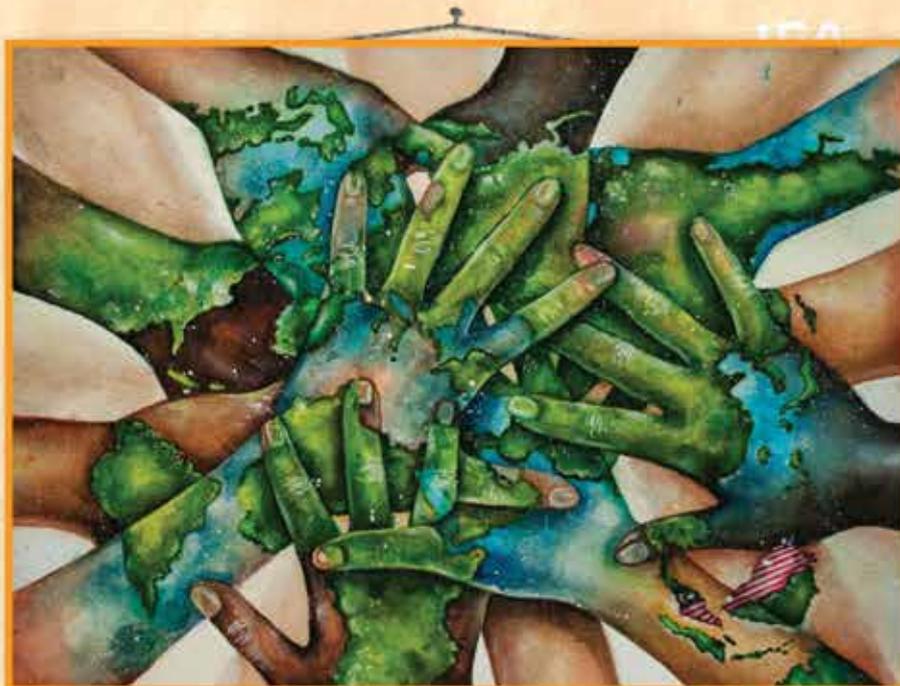
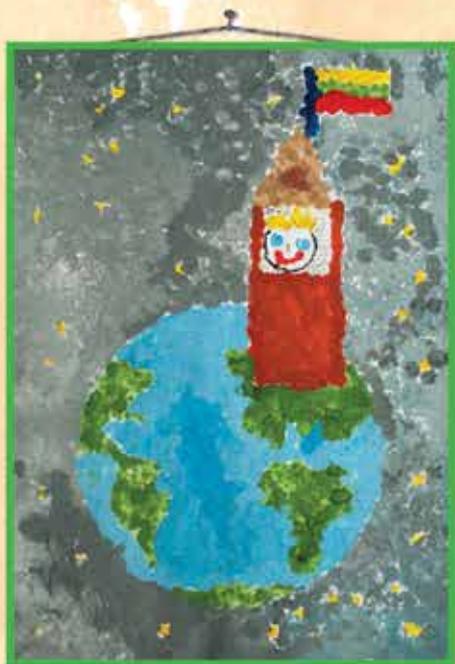
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children's map gallery 2015 winners



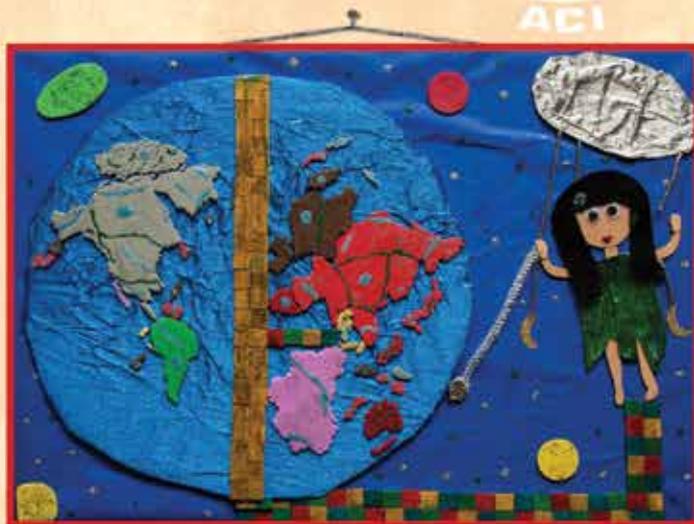
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Note: The authors of the above submission are three blind children who constructed a map for the blind using methodologies learned at their special school.

