



president's report



Dear Colleagues

The International Cartographic Association (ICA) is working with several instruments to promote our discipline worldwide. The most important

ones are conferences and commissions. In this newsletter once again you will find a number of interesting reports from several ICA Commissions, covering great variety of activities being undertaken by our Association. Some of the highlights include workshops and symposia, such as the recent ICA Commission on Map Generalisation workshop in Istanbul or the ICA Commission on Map Production and GeoBusiness symposium

(in association with five other ICA commissions) held in Vienna. Our Commission chairs, together with the ICA Executive Committee and many other ICA members, are working hard to spread the unique potential of cartography and GIScience in solving global issues and challenges. At this point I would like to express my sincere thanks to all of them!

In terms of conferences, the International Cartographic Conferences (ICC) are the ICA's "flagship" events. Earlier this year and in accordance with the ICA rules, the Executive Committee called for bids to organise the ICC in 2017. All received bids were carefully evaluated taking into account their formal requirements and conference proposals. Based on an objective and transparent procedure and strictly following the rules, the decision was

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26th international cartographic conference 2013 dresden · germany

Dresden is getting ready for ICC 2013!



First of all, as many of you have certainly noticed, the on-line registration for the 26th ICC in Dresden in August 2013 is open since 15 November 2012!

You may have wondered why we chose the motto *From Pole to Pole* for our Conference. Well, apart from the fact that the organising Institute for Cartography of the Dresden University of Technology has for many years been working between Siberia, Spitzbergen and Greenland on the one end of the globe and in the southern Andes/Patagonia and Antarctica on the other, this slogan should also emphasize the world-spanning and ever increasing importance of geoinformation and, in particular, cartography. Furthermore, it should also point towards the need for cartographic cooperation in the remote polar regions of our world.

This brings me to the point where I want to draw your attention to a keynote address given by the Canadian National Mapping Agency, the Centre for Topographic Information in Sherbrooke, in which the establishment of an Arctic SDI under the leadership of Canada will be presented. However, the first keynote address of our Conference will be given by the founder and CEO of Esri, Dr Jack

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Night panorama of Dresden, Germany, the host city of the 26th International Cartographic Conference, 25-30 August 2013 | *Photography Kolossos*



Institutional support is something we often take for granted. Whether it is a financial contribution towards our participation in an international conference or help with using a computer lab for a workshop, we tend to think it is only natural to expect assistance from our employer. I am sure many of us enjoy good employment relations. We are looked after and in exchange we give back our time, skill, dedication and loyalty. This 'equilibrium' is mutually beneficial and desirable in every respect.

The situation changes dramatically when institutional support is withdrawn. This could be the result of a political decision or financial hardship, but whatever the reason, our world and consequently our profession might suffer because of it. A change in business direction of one of my former employers cost me a job. A political decision in the mid 1990's to restructure the national mapping organisation in New Zealand contributed to the collapse of the Cartographic Society. These might be extreme examples, but I am sure there are other, perhaps less dramatic ones, that clearly demonstrate the wide-ranging impact of losing institutional support.

As many of you are aware, for over four years the Hong Kong Polytechnic University provides people and resources to help ICA publish *ICA News*. When Prof Zhilin Li was no longer available to support this work, we lost not only his helping hand but with him the Polytechnic's institutional support. For several weeks we faced a significant problem of having no solution to this issue. But as it is with the loss of institutional support that could crumble our efforts, the same institutional support can save the day. Thanks to Prof Lilian Pun, the Hong Kong Polytechnic University is again helping us! The support of the Hong Kong Polytechnic University or in fact any institution provides unquestionable value to organisations like ours. Such help should be actively protected and nourished.

ICC 2013 is around the corner and a timely update from Germany provides extra incentive to meet in Dresden. Our *Map of the Month 2012* gallery again inspires us with cartographic innovation and aesthetics. I hope you find this issue interesting.

Igor Drecki | Editor *ICA News* | ICA ●

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02 | number 59 | december 2012

made to award United States of America with the organisation of ICC 2017, thus making Washington DC the venue of the 28th ICA Conference. Congratulations!

Before then, we will have a chance to meet twice; at the 26th ICC in Dresden, Germany in August 2013 and then at the ICC 2015 in Rio de Janeiro, Brazil in August 2015. These events will give us an opportunity to report on our work, express the relevance of cartographic research, get new ideas and make friends.

The Local Organizing Committee of the ICC 2013, including long-standing affiliates of ICA Manfred Buchroithner, Dirk Burghardt and Nikolas Prechtel among others, is working hard on preparing the event. A number of interesting keynote speakers, including Jack Dangermond from Esri, recipient of the Carl Mannerfelt Gold Medal, will present new perspectives on cartography and related fields. Given the unique venue that allows a lot of flexibility, the ICC 2013 will see some innovations in the way it will be arranged, including plenary sessions and discussions, and ignite talks. While the call for submissions is now closed, the number of submitted papers (over 850) will for sure guarantee high quality of the conference programme. Although many of us are affected by recent financial constraints regarding conference travelling, I consider participation in ICC 2013 a must for anybody who is in whatever way affiliated with cartography and GIScience. I sincerely hope to see you there!

ICA is participating regularly in events and initiatives organised by the United Nations (UN). The UN Global Geospatial Information Management initiative (UN-GGIM), set up in Seoul, South Korea in 2011, gains a lot of attention. ICA has an observer status at the meetings but it is also represented through the membership in the Joint Board of Geoinformation Societies (JBGIS), which is recognized by the UN-GGIM administration as a key partner. As President I have represented ICA at the second high-level forum of GGIM at the UN

Headquarters in New York in August 2012 and intend to participate at the third meeting in Doha, Qatar in February 2013. Vice Presidents Tim Trainor and Derek Clarke are both regular participants of these meetings as national representatives, thus giving ICA an even stronger visibility. Immediate Past President William Cartwright, as current chair of JBGIS, plays a leading role in steering the UN-GGIM initiatives and will be responsible for setting up a very important Exchange Forum with the geospatial industry at the 2013 Doha meeting.

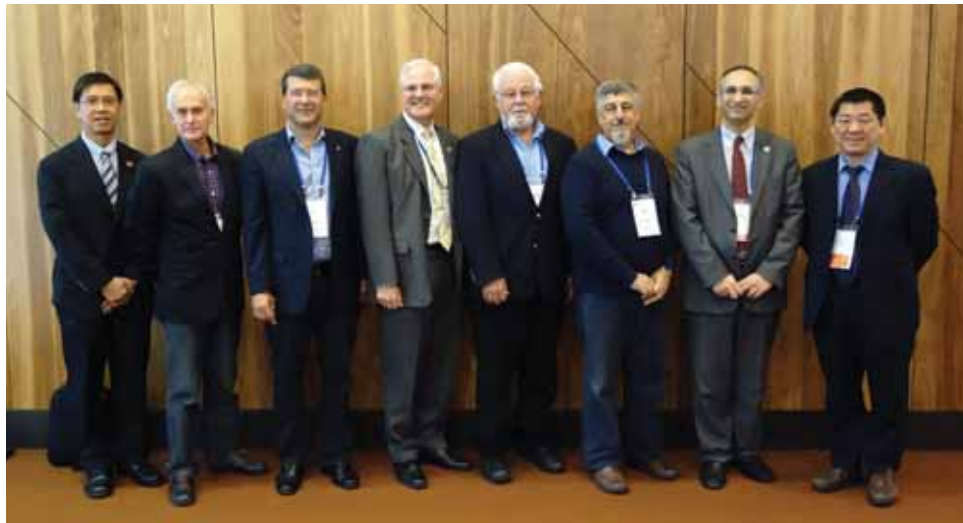
I represented ICA on several occasions, including the 4th International Conference on Cartography and GIS in Albena, Bulgaria between 18-20 June 2012. The Conference was again superbly organized by Professor Temenoujka Bandrova and her team.

The XXII Conference of ISPRS took place at Melbourne, Australia between 25-29 August 2012. ISPRS, as one of the ICA sister societies, has elected a new executive and ratified its commissions, some operating in similar subject areas to ICA Commissions. Some joint activities, such as commission meetings or sessions are under discussion.

GeoCart'2012 and the 2nd ICA Regional Symposium on Cartography for Australasia and Oceania took place in Auckland, New Zealand between 29-31 August 2012. The New Zealand Cartographic Society (NZCS) is quite active in relation to its size (number of members) and again managed to organise the most successful conference with prominent keynote speakers, including Tom Patterson, Aileen Buckley, Dave Fairbairn and Roger Smith. I was also asked to address the assembly and participate in a plenary Panel Discussion involving all keynote speakers and the audience. The outgoing President of NZCS Geoff Aitken was awarded Life Membership and, on behalf of the ICA, I took the opportunity to congratulate him on receiving this most prestigious Society award.

On 1 September I travelled to Taurewa near

Current Members of the Joint Board of Geoinformation Societies (JBGIS): (from left) CH Teo (FIG), W Cartwright (JBGIS), G Gartner (ICA), M Cygan (IMIA), T Milne (IEEE-GRSS), C Rizos (IAG), A Rajabifard (GSDI), Chen Jun (ISPRS) | Photograph courtesy of Georg Gartner





Panel Discussion with keynote speakers at the GeoCart'2012 Conference: (from left) David Fairbairn, Georg Gartner and Roger Smith | Photography Marney Brosnan

Tongariro National Park, New Zealand to attend the 8th Mountain Cartography Workshop organised by NZCS and the ICA Commission on Mountain Cartography (www.mountaincartography.org). The specific importance of depicting mountains and terrain has led to the foundation of the ICA Commission on Mountain Cartography in 1999 at the Ottawa meeting. Since then, the Commission chaired by Lorenz Hurni from Switzerland (1999-2007) and Karel Kriz (since 2007), has managed to attract talented cartographers and fascinating aficionados of all kind and backgrounds, with a common interest in mountain cartography. The unique spirit of this group has proven to be very much alive and inspiring, as was certainly evident from the Workshop perfectly organized by the New Zealand hosts.

In October 2012 I represented ICA at the INTERGEO and the 60th German Cartographic Conference in Hannover, Germany. INTERGEO is the biggest international "geo-fair" organized annually, targeting a wide range of geo-industry players and attracting up to 15,000 visitors. The German Cartographic Conference is joining the fair every second year as part of the conference programme. A pre-event workshop on *Map Creation from User Generated Data* was organized at the University of Hannover by Professor Monika Sester. My visit to Hannover provided an opportunity to discuss the progress with ICC 2013 preparations.

Apart from Cuba, none of the Caribbean nations is currently a member of the ICA. Based on a recommendation made by Cecille Blake (UN-GGIM), the 6th URISA Caribbean Conference held in Montego Bay, Jamaica in November 2012 acted as a link between ICA and the National Mapping Agencies and other representatives of the region. The aim was to make contacts and inform them about our Association, which will hopefully lead to a new membership from the region.

In November 2012 my research group at

Vienna University of Technology hosted a 2-day workshop on *OpenSource WebMapping* for UN staff. The Workshop was based on the initiative of Suchith Anand and Barend Köbben (ICA Commission on Open Source Geospatial Technologies) and was organized in conjunction with Markus Jobst (ICA Commission on Map Production and GeoBusiness). Barend Köbben from ITC was the chief lecturer at the Workshop, which attracted more than 20 UN staff.

The Symposium on *Service-oriented Mapping* held in Vienna in November 2012 and organized by the ICA Commission on Map Production and GeoBusiness was a total success. Participants from OGC, EuroGeographics, various National Mapping Agencies and representatives of industry and academia shared their perspectives, results and ideas on this new paradigm of web mapping.

Finally I have been able to represent ICA at the UN International Expert Meeting on *Crowdsourcing Mapping for Disaster Risk Management and Emergency Response*, which took place in December 2012 in Vienna.

As President I was invited several times to express my views on behalf of the ICA concerning major developments in modern cartography. Related articles and interviews have been published in the *Geospatial World* (July 2012), *GIM International* (August 2012), the *GISportal.cz*, *Indian Cartographer* (31, 2011) and *Geospatial Today* (11, 2012).

Earlier this year ICA invited students, young cartographers and enthusiasts to express their vision on modern cartography by submitting a video. It was envisaged that the video would focus on answering the following questions: How cartography relates to situations in daily life? and What is the role of cartographers? The ICA Executive Committee judged the entries on their originality, creativity and adherence to the theme. Mr Jeff Welter was announced a winner of the ICA Video Competition 2012. The video is available on the ICA Youtube Channel. Any

comments are welcome, including your ideas on how to promote the importance and relevance of cartography in today's daily life, either at a local or global scale.

Another development that occurred earlier this year was the transfer of proofing and distribution of our ICA newsletter. Former Vice President Professor Zhilin Li was unable to continue this important work, hence we had to find an alternative. Fortunately Professor Lillian Pun from Hong Kong Polytechnic University agreed to help us in finding a suitable person and keeping the production and distribution in Hong Kong. At this point, I would like to thank Prof Pun for her help and acknowledge the contribution and assistance of Miss Mandy Tang, also from Hong Kong Polytechnic University, who checks and then arranges postage of *ICA News* on a voluntary basis. It is the effort of individuals like Mandy that makes ICA special – a community of committed contributors who are always happy to help our Association reaching out.

Let me finish with highlighting Resolution 6 of the UN Regional Cartographic Conference (UNRCC) held in Bangkok, Thailand in November 2012. It recommends our Association to organize the International Map Year in 2015. This puts cartography, maps and the ICA in an excellent position! The resolution reads:

Resolution 6. Usefulness and benefits of geospatial information

The conference,

- recognizing the enormous benefit of reliable and authoritative geospatial information and maps in decision making for sustainable use of natural resources, economic development and for community well being;
 - noting the need to promote geospatial information education and training for national governments, decision makers, the geospatial industry and users;
 - also noting the preparations made by the International Cartographic Association ad-hoc committee for the International Map Year, and the support by the Joint Board of Geospatial Societies (JB-GIS) on this initiative;
- recommends the International Cartographic Association (ICA) to organize an International Map Year in 2015.*

The resolution has been adopted and included in the report from the UNRCC 2012.

At present the task of responding to this resolution has been given to former President Bengt Rystedt and former Secretary General Ferjan Ormeling, both providing the necessary concepts and documentation through the ICA Working Group on International Map Year, and immediate Past President William Cartwright for working through the UN administration.

Georg Gartner | President | ICA ●

President

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ica news contributions

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Submission Deadlines

15 May for June editions

15 November for December editions

26th international cartographic conference dresden · germany cont...

Dangermond about a topic which is still a secret. Dr Fenella France, Chief of the Preservation Research and Testing Division of the Library of Congress in Washington, DC, will talk about the famous Waldseemueller Map, a present from Germany to the (not only cartographic!) world. In total at least eight interesting invited keynote addresses are awaiting you!

From Pole to Pole also stands for the touristic attractiveness of Dresden, frequently called *The Florence of the North*. It is without exaggeration that Dresden boasts the highest density of globally significant art treasures in Europe concentrated in one spot of just half a mile square. This also implies that all conference and tourist sites are more or less within a walking distance of no more than 20 minutes; hence, Dresden may also be seen as a sort of a global *magnetic pole* in tourist terms. Just think of Raffaello Santi's renowned *Sistine Madonna* or the well-known *putti* (cherubs) painted by him: their originals are on display in the famous Zwinger – Dresden Royal Summer Palace. And who knows that Giacomo Cananova's mother worked as an actress at the Royal Theatre in Dresden and her son visited her and his brother a few times here? You can also make use of a



The Basteibrücke bridge is the most famous landmark of the Saxon Switzerland National Park | *Photography Je-str*

free one-week public transport pass and visit tourist attractions like the unique sandstone-spire-and-cliff landscape of the Saxon Switzerland National Park, some 25-30km southeast of Dresden. Despite tens of thousands of tourists from all over the world visiting Dresden during the summer season, we succeeded to reserve several hundred hotel rooms for reduced conference rates, as well as hostel beds for low-budget participants. For some EUR15 per night one can already stay in one of the Dresden youth hostels.

The ICA Executive Committee is currently evaluating the applications for the ICA Travel Awards. In addition, we are still working to obtain additional funds for financial support of participants from developing or threshold countries. More than 850 submitted contributions by authors from over 70 countries are going to guarantee a wide variety of highly interesting oral and poster presentations. The NMA Day coordinated by the German Federal Office for Cartography and Geodesy aims to bring together plenty of national mapping agencies and Esri organises a workshop on map design. Several panel discussions will also be held. The social programme offers a lot to both participants and accompanying persons, like the Conference Gala Dinner or the Young Cartographers' Social Evening in the students' quarter of Dresden-Neustadt.

A novelty will be the orienteering competition with both start and finish line in front of the conference centre. The younger participants might like our mountain biking or river rafting geocaching. Of course, all the usual ICC events like the children's map exhibition and competition will also take place. In addition to interesting technical tours in and around Dresden, a fabulous post-conference excursion to the cartographically prominent places of Gotha and Leipzig will be organised by the ICA Commission on the History of Cartography. Make sure to register in due time for the technical and tourist excursions of your interest.

Please be aware that from 1 February 2013 you will be receiving notifications about the abstract or full paper acceptance and subsequently about the acceptance of papers to one of the four journals: *CaGIS*, *Cartographica*, *Kartographische Nachrichten* and *The Cartographic Journal*, or to the *Springer Lecture Notes in Geoinformation and Cartography*.

Manfred Buchroithner | Chair | ICC 2013 Local Organizing Committee | *Germany* ●

The Zwinger – Dresden Royal Summer Palace | *Photography Kolossos*

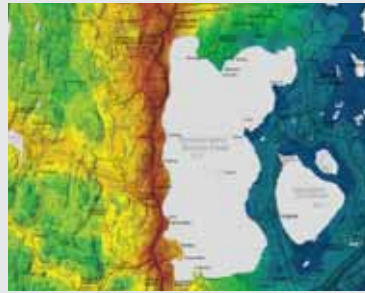


january



Bhutan | Ministry of Defence |
Austria

february



Hiking Routes between Salmi
and Oittaa, Nuuksio National
Park, Finland | Finnish Geodetic
Institute | *Finland*

march



Panoramic Tourist Map of Resort
Sunny Beach, Bulgaria |
Cartographic Studio DavGEO |
Bulgaria

april



New Zealand Photo Atlas | Hema
Maps Pty Ltd | *Australia*

may



Grosser Kozenn-Atlas | Ed. Hölzel
| *Austria*

june



France: Physique, Administrative
| SSPE Kartographia | *Ukraine*

july



Kii-Kinki 360° Panorama Map |
The Workshop Studio Tonbi's Eye (the
Eye of Kite) | *Japan*

august



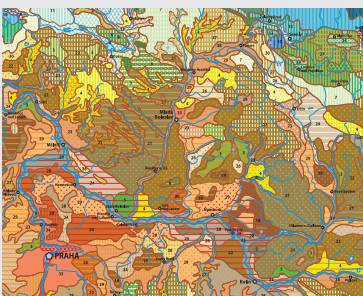
Bohinj (Julian Alps · Triglav - Krn
- Črna prst) | Sidarta | *Slovenia*

september



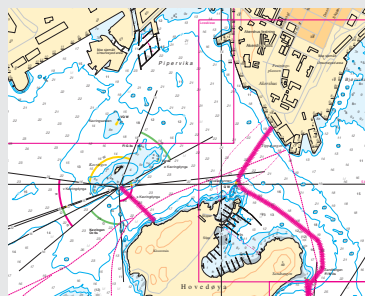
South America | Litografia Artistica
Cartografica | *Italy*

october



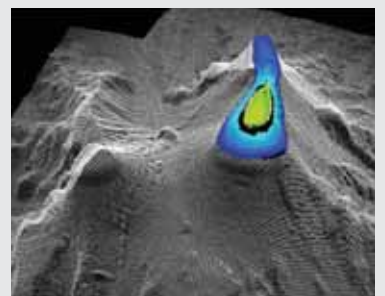
Landscape Atlas | Ministry of
Environment – The Silva Tarouca
Institute for Landscape & Ornamental
Gardening | *Czech Republic*

november



452 Oslo Havn | Norwegian
Hydrographic Service | *Norway*

december



Litto 3D sur l'île de Ré et sur les
îles Éparses | IGN – Service
Hydrographique et Océanographique
de la Marine | *France*

martin gamache



My decision to study Geography came to me in the early and mid 90's, after a few years of drifting in the mountains of British Columbia in Western Canada, the jungles of Indonesian Borneo

before oil palm plantations took over, and the Highlands of Chiapas during the Zapatista uprising. Maps and crafting them had been around me all my life, but in particular they helped me to better understand and contextualize my coming of age experiences, which in turn inspired me to pursue their creation as a career. I graduated from the Geography Department the University of Ottawa in 1998. From Ottawa I moved to South America working in Peru for the Mountain Institute and the Canadian Museum of Nature. In 2001 I took my first cartography job with the Boston Redevelopment Authority where I was responsible for a complete redesign of the City of Boston's Zoning Atlas and where I used dasymetric mapping to refine census and land use data to be more useful to planners. I launched my own mapping business, the Alpine Mapping Guild in 2004 and created maps for a variety of academic, publishing and government clients. I was the cartographer for the American Alpine Journal.

I've crafted maps for climbers and backpackers of remote ranges in Kyrgyzstan, Peru and the United States. In 2005 I attended Boston University where I pursued graduate work modeling biodiversity at global scales using primary productivity data and using satellite imagery to create improved depictions of vegetation for topographic maps. I'm currently employed by *National Geographic Magazine* as a senior graphic editor, responsible for maps and graphics that illustrate articles for the magazine. Innovating new ways to use maps and keep them relevant in an increasingly interactive media environment is one of my new challenges but my main goal as a cartographer remains finding elegant solutions to complex cartographic problems, without sacrificing accuracy or resorting to oversimplification. Geography lies at the intersection of the social and physical sciences. Cartography, is its language and expressing myself beautifully with it is my life's work. What Geographer Peter Hagget has described as the Geographer's art, the art of the mappable.

Martin Gamache | National Geographic Magazine | USA | mgamache@ngs.org

www.kartengeschichte.ch

Since 1990 the working group on History of Cartography of the Swiss Society of Cartography publishes the *Cartographica Helvetica* journal. The Journal focuses on the history of cartography and facilitates communication between map collectors, researchers and dealers. It is the only such journal in the German language area, but all scientific articles are covered by a summary in English and French.

Cartographica Helvetica aims to provide information on every aspect of early maps, their history, as well as production methods and forms a valuable reference library. It is published twice a year, in January and July, and comprises around 60 pages per issue. The size is A4 (21 x 29,7cm) and its superb illustrations are in colour.

Each issue includes articles in German, written by leading experts, but the themes are international in scope. The articles deal with both Swiss and international maps and map makers. Apart from articles, the Journal includes:

- News on present and future map facsimile projects
- Reviews on books, exhibitions and conferences
- Reader's forum
- Map quiz
- Information on forthcoming auctions and events
- Classified advertising section for map dealers and collectors on map sales and exchange

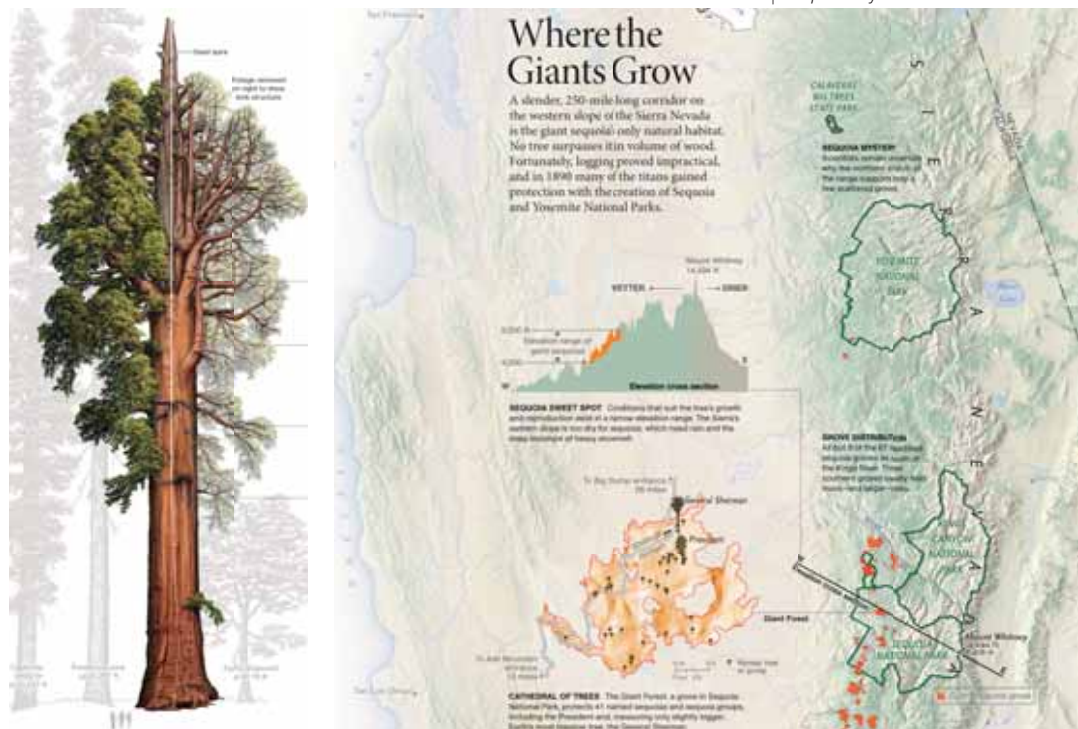


Recent cover of the Cartographica Helvetica journal

The History of Cartography working group has also successfully organised two large conferences: the 8th Kartographiehistorisches Colloquium (1996) and the 22nd International Conference on the History of Cartography ICHC (2007), both in Berne.

Hans-Uli Feldmann | Editor | Cartographica Helvetica | Switzerland

Where the Giants Grow, *National Geographic Magazine*, December 2012: (left) Illustration of The President tree, a Giant Sequoia found in Sequoia National Park, California, USA; (right) Sequoia giganteum range map, elevation profile and The President location inset | Graphics by Martin Gamache



The University of Balamand (UOB) in Koura boasts Lebanon's first fully operational academic center devoted to advancing GIS knowledge in the nation. It was established in 1999 within the Faculty of Engineering to serve faculty, students, and staff by coordinating the acquisition, instruction, deployment, and development of Geographic Information Technologies on the UOB campus. The difference of this Center is in its belonging to an educational institution; the fact that shaped its mission towards advancing knowledge in GIS technologies through real projects using modern educational techniques. The Center is student-based; it aims at engaging youth in community-based projects using experimental practices hence promoting "learning through doing". Its primary objective is to prepare skilled GIS individuals who can participate in building, using and maintaining GIS applications.

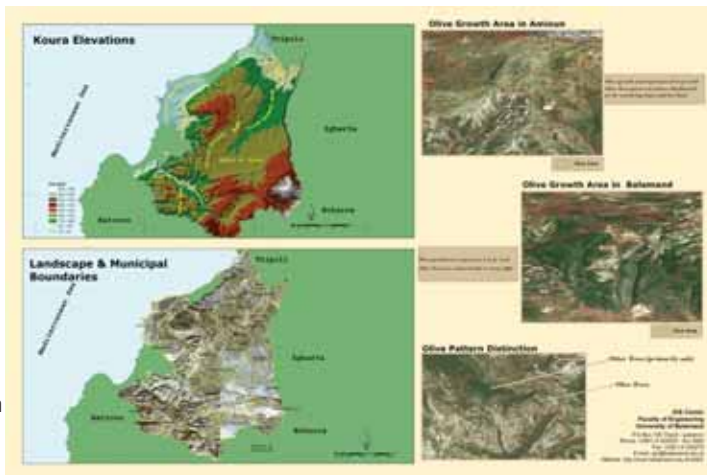
In its early days, the activities of the Center attracted many local agencies and authorities around the University in particular. This led to extreme appreciation of the GIS potential in improving their governance and the quality of life of the citizens. As a result, the GIS Center became a focal point for promoting geographical know-how in the northern Lebanon. Following the successful completion of

a number of projects, the activities of the GIS Center became known throughout the country and its services became sought after by many active national and international development organizations who found it essential to engage the academic sector in their projects.

The GIS Center became a center of excellence in Lebanon and the Middle East and it won national and international awards on many occasions. Such a standing has been achieved through a strategy in which a well defined hierarchy was coupled with a dedicated human element and sophisticated tools directed to realize a clear mission: "developing GIS knowledge in-line with national needs".

Amal laaly | Supervisor | GIS Center | University of Balamand | *Lebanon* ●

A sample of GIS research on olive growth in Koura undertaken by the GIS Center, University of Balamand, Lebanon | *Photograph courtesy of GIS Center, UOB*



icc 2015

www.icc2015.org



The ICC 2015 Local Organizing Committee and the Brazilian Society of Cartography selected the SulAmerica Convention Center for a venue of the 27th International

Cartographic Conference to be held in August 2015, in Rio de Janeiro, Brazil. Its location is central and very convenient, only 15 minutes from Santos Dumont Airport, 20 minutes from Tom Jobim Airport, less than 10 minutes from the New Bus Station Rio and next to the Cidade Nova-Estácio subway station. Besides, the main city bus routes pass in front the Center, facilitating easy access to and from any other city venues and attractions.

Paulo Menezes | Chair | ICC 2015 Local Organizing Committee | *Brazil* ●

A courtyard in front of the SulAmerica Convention Center, Rio de Janeiro, Brazil | *Photograph courtesy of Centro de Convenções SulAmérica*



ica news 25 years ago...

Presented below is a rare reflection on the first 25 years of our Association with a particular attention to the 1984-87 period.

Igor Drecki | Editor ICA News | *ICA* ●

ICA Newsletter, No 10, December 1987

Report of the Secretary 1984-87

INTRODUCTION

At the beginning of the period under review, the ICA had completed its first 25 years of existence. It was a period of many distinctions, growth and development for the Association, dominated by cartographers [from] Europe, the United States and the United Kingdom.

For the first time in its history, the General Assembly moved to the southern half of the world for its meeting in Australia and an Executive Committee was elected that represented cartography across almost the four corners of the earth.

The new committee was conscious of the work of its predecessors and aware of its enormous responsibilities in not only continuing the growth of the ICA but meeting the challenge of the new technologies that cartographers around the world were facing. [...]

CONCLUSION

Although the current term was reduced to 3 years only instead of the normal 4 years between General Assemblies, it was nevertheless a very active one for the Executive.

Many new ideas were put forward to improve the operations of the ICA, particularly with Commissions and Working Groups and to improve the way that publications were handled.

At all times the promotion of the ICA as the authority for cartographic matters on the international scene was kept in view and the Executive accepted every opportunity to have ICA seen as a co-sponsor of all worthwhile meetings around the world.

The ICA had to face the increasing expansion of other professions into the traditional areas of cartography as everyone embraced the new technologies.

It can safely be said that ICA increased in stature in this period under the Presidency of J. Morrison, supported by the co-operation of an excellent Executive Committee that represented such a vast area of the earth's cartographic population.

The large number of nominations for the positions of Vice-Presidents in the next Executive indicate the interest in ICA and ensures that the good work of the past will be maintained.

D. T. Pearce, Secretary ICA / 25 September 1987

Atlases

www.univie.ac.at/cnra/

Conference in Kiev, Ukraine

The 5th All-Ukrainian Scientific and Practical Conference entitled *National Atlases in the Formation of the Global Information Space* was held between 12-15 September 2012 in Kiev (Kyiv), Ukraine. The main organizers were the Ukrainian Academy of Sciences (Institute of Geography) represented by Leonid Rudenko, and the State Scientific and Production Enterprise *Kartographia* represented by Rostislav Sossa. The National Committee of Geographers of Ukraine, the Ukrainian Geographical Society, the Ukrainian Cartographic Association as well as the ICA Commission on Atlases coorganised the Conference. Viktor Putenko from the Ukrainian Academy of Sciences deserves special recognition for coordinating a large team of volunteers.

The very comprehensive scientific programme included 64 presentations in plenary sessions. The majority of papers (36) demonstrated a huge variety of Ukrainian atlas production and design, ranging from the most impressive national atlas, through the historical and school atlases to the city atlases like the new city atlas of L'viv. The Russian atlas cartography was also represented well (11 papers) with several interesting presentations by colleagues from Moscow State University, the Scientific and Production Association *Cartography*, and the Institute of Geography of the Russian Academy of Sciences. Other contributions came from Belarus (6 papers) and Kazakhstan (3). The Kazakh colleagues headed by A Medeu presented their new national atlas. Single papers from Australia, Austria, Armenia, Czech Republic, Georgia, Lithuania and Switzerland complemented the programme. A tour to the Ethnographic Museum of Folk Architecture and Life of the Middle Dnieper in Pereyaslav-Khmelnytsky and a dinner in the evening of the first full day of the Conference day provided a very pleasant and entertaining addition to the programme.

Workshop in Guangzhou, China

The ICA Commission on Atlases in cooperation with the Chinese Academy of Sciences, the Geographical Society of China, the Surveying and Mapping Society of China and the Geological Society of China organised a workshop on City Atlases. It was organised in Canton [Guangzhou], China, on 21 October 2012 at the Sun Yat-sen University as part of the 7th National Conference on Cartography and Geographic Information Systems of China. The lion's share of local organization was in the hands of Qingwen Qi (Beijing), Vice Chair of the ICA Commission on Atlases.



Participants of the ICA Commission on Atlases Workshop in Guangzhou, China | Photograph courtesy of Peter Jordan

The Workshop's programme included papers by (in the order of presentation):

- Vít Voželínek (Czech Republic) – *Contents of a thematic atlas: From map collection towards an atlas information system*
- Qingwen Qi (China) – *Summary and achievements of city atlases in China*
- Dariusz Gierczak (Germany) – *Historical-Topographical Atlas of Silesian Towns*
- Qingyun Du (China) – *Research and practice of an on-line urban dynamic electronic atlas*
- Yi Long and Xiaoyan Liu (China) – *Research and application of a phonic city navigation atlas*
- Renzhong Guo and Jiangtao Liu (China) – *Technologies and characteristics of the Shenzhen-Hong Kong Atlas*
- Hailiang Jiang and An Zhang (China) – *Edition and features of the Shaoxing City Atlas*
- Xiaoping Pang (China) – *Technologies and display of the Guangzhou Image Atlas*
- Tomáš Hudeček and Zuzana Zakova (Czech Republic) – *Radial anamorphosis cartographic method used for thematic maps in a city atlas*
- Chenyan Ma (China) – *Visual art design of a city atlas*

The event provided a good representation of Chinese city atlas production, although some of the atlases were regional in scope rather than urban, since in some cases the administrative category of a "city" refers to a wider region and not just to an urban area. Contributions from the Czech Republic and Germany, as well as participation of three delegates from Vietnam made the Workshop an international event. The programme was complemented by a dinner courtesy of the Chinese Academy of Sciences.

Symposium in Vienna, Austria

Within the International Symposium on Service-Oriented Mapping (SOMAP 2012) held at the Austrian Federal Office for Metrology and Surveying in Vienna, a joint event of five ICA Commissions (Map Production and GeoBusiness, Atlases, Map Projections, Maps and the Internet and Use and User Issues) was professionally organized by Dr Markus Jobst.

The ICA Commission on Atlases held a dedicated session on 22 November devoted to

presentations of new atlases from Central Europe. Ten short papers were presented:

- Martin Seger (Austria) – *Atlas of the Habsburg Empire*
- Pavel Ptaček (Czech Republic) – *Atlas of the Carpathian Macroregion*
- Jan Feranec (Slovakia) – *Land Use/Land Cover Changes in Selected Regions in the World – 7 volumes of the Atlas issued by IGU-LUCC*
- Ivan Bičík (Czech Republic) – *Y Himiyama, I Bičík and J Feranec (eds), 2012: Land Use/Land Cover Changes in Selected Regions in the World, Vol VII*
- Vít Voželínek, Alžběta Brychtová, Alena Vondráková and Jan Michalík (Czech Republic) – *Atlas of Special Education Centres in the Czech Republic*
- Lucie Kupková (Czech Republic) – *Atlas of Socio-spatial Differentiation in the Czech Republic, Karolinum, 2011*
- Jozef Mladek (Slovakia) – *Population Atlas of Slovakia*
- Dagmar Kusendova and Juraj Majo (Slovakia) – *Historical Atlas of the Lutheran Church in Slovakia*
- Károly Kocsis, Anikó Kovács and Norbert Agárdi (Hungary) – *Hungary in Maps; Southeastern Europe in Maps and Ukraine in Maps*
- Eric Losang (Germany) – *Digital Atlas of Political Representations of Space in Central-East Europe in the 20th century*
- Wolfgang Kreft (Germany) – *City Atlas Silesia*

Peter Jordan | Chair | ICA Commission on Atlases | Austria ●

Cartography and Children

lazarus.elte.hu/ccc/ccc.htm

During the last six months the ICA Commission on Cartography and Children has been focussing on the organization of the next Barbara Petchenik Competition and on increasing contacts with other international organizations.

Meeting in Albena, Bulgaria

On 20 June 2012 in the afternoon, the Commission organized a meeting attended by colleagues from nine countries during the 4th Conference on Cartography and GIS in Albena, Bulgaria. Due to the rigorous conference programme, the time for a detailed discussion was relatively short (the meeting was one hour long), but long enough to present and discuss several points, mainly relating to the Barbara Petchenik competition in 2013, such as the theme (*My place in today's world*), ideas for improving the participation in the next competitions and analysis of proposed rule changes. Other points included international relations of the Commission (EUROGEO, IGU CGE) and the possible solutions to publicize better and more widely the work of the Commission. One of the most important decisions taken by the participants was to organize a voting process and ask all Commission members and interested colleagues for significant proposals related to possible changes in the rules. This was fulfilled in the weeks following the meeting.

Barbara Petchenik Competition 2013

Between 26 June and 15 July a voting took place concerning proposed changes to the Barbara Petchenik competition rules for the 2013 and 2015 edition. After our Paris meeting in July 2011, Commission members sent their recommendations for changes based on practical experience from the national competitions they coordinated. These recommendations were grouped into four main themes and a voting form was sent out. During the following three weeks, 36 colleagues from 23 countries returned their votes. The final recommendations are:

- to change the structure and expand the number of age groups from three to four by adding a new under 6 years age group and

retaining the other three age groups: 6–8, 9–12 and 13–15 years (19 votes)

- to set the maximum number of authors of a single drawing to three: 16 votes
- to retain the maximum size of the drawings at A3 size (420mm x 297mm or 17in x 11in): (20 votes)
- to retain the restriction that only accredited ICC delegates and visitors to the International Children Map Exhibition are eligible to cast their vote for the Public Award: (14 votes)

The rules for the Barbara Petchenik Competition in 2013 and 2015 were modified accordingly, adding the new theme for both competitions: *My place in today's world*. The latest version of the rules can be downloaded from the Commission website. Our website also contains other useful materials, particularly for running national competitions, such as parental permission form for the entries, resource material written by Henry Castner (USA) and a collection of 32 different blank graticules that can be used by teachers and children for map drawing.

Contacts with EUROGEO

The EUROGEO 2012 Symposium was organized between 31 May - 2 June in Dublin, Ireland by the European Association of Geographers (EUROGEO) under the theme *Geography and Global Understanding: Connecting the Sciences*. Commission Chair Jesús Reyes participated in the event, representing ICA and the ICA Commission on Cartography and Children. The Symposium gathered more than 150 delegates from 36 countries. Professor Karl Donert, President of EUROGEO, invited us to introduce ICA to members of EUROGEO during the Opening Ceremony. All papers and presentation from the Symposium can be accessed from www.eurogeography.eu/conference/dublin-2012/dublin2012-presentations.html.

Contacts with IGU Commission on Geographical Education

The International Geographical Union Commission on Geographical Education (IGU-CGE) Symposium was held at the University of Education in Freiburg, Germany between 22-25 August 2012, immediately before the IGU's 32nd Congress. Commission Chair Jesús Reyes participated in this Symposium, meeting colleagues from the IGU Commission.

The event presented a good opportunity to exchange ideas about future synergies between our Commissions and strengthening our contacts with more specific common activities. One of the outcomes of this meeting was an official invitation to IGU-CGE issued by the ICA President Georg Gartner and CCC Chair Jesús Reyes to participate in the 2013 Barbara Petchenik Competition. This invitation can be accessed from their website (www.igu-cge.org) and is due to be published in their next newsletter.

CCC Facebook Profile

The Commission established a Facebook profile on 21 July 2012 (www.facebook.com/icacccc). It was created for two main reasons:

- to facilitate a direct contacts between Commission members who have their own Facebook profiles and giving them a common platform to read about the Commission activities and other information related to our research field

to publicise the Commission and our activities to a wider spectrum of people
The statistics collected during the last few months confirmed this was an excellent idea; only in the week between 27 September and 3 October 2012, a total of 589 visits were made to our profile.

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

Participants of the ICA Commission on Cartography and Children meeting in Albena, Bulgaria | *Photograph courtesy of José Jesús Reyes Nuñez*



Education and Training

lazarus.elte.hu/cet/

After a significant commitment over many years as member (1995-2003), Vice Chair (2003-2007), and Chair (2007-2012), Dr David Fraser has stepped down from the ICA Commission on Education and Training, following retirement from his academic post at RMIT University in Melbourne, Australia. David pursued an ambitious set of Terms of Reference during his time with the Commission and the results have been evident in a host of projects and on-going initiatives which are recorded on the Commission website. László Zentai, Secretary General and Treasurer of ICA and liaison for the Commission with the Executive Committee is maintaining the website, but

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leadership of the Commission has passed to Dr David Fairbairn, Newcastle University, UK, who intends to follow the excellent example of David Fraser in ensuring relevant and active attention to all matters of education and training within ICA. David will be assisted by Vice Chair Prof Necla Uluğtekin (Turkey) who has many years' experience in cartographic education at a high level. It is clear that some of the Commission's activities will be undertaken jointly with other Commissions and we look forward to workshops and meetings which reach out to fellow cartographers, in order to promote awareness and good practice in areas such as open source cartography, children's issues and outreach. In addition, we hope to engage with educators and trainers in related disciplines (e.g. with the Education Commission in ISPRS) to examine different methods.

The Education and Training Commission anticipates active sessions at the ICC 2013 in Dresden, and the regular business meeting, followed in 2014 with a dedicated Commission Symposium, probably in China, where significant developments in cartographic education are taking place. The contrast between those countries where cartographic education is flourishing (e.g. China, Spain, Turkey) and those where there is a decline, is striking and this needs to be addressed at an international level. Along with the promotion of cartographic education in areas where little exists at the moment (e.g. in many African countries), these should form the major challenges of the Commission.

Please contact the Chair if you wish to comment on or contribute to the work of the Commission.

David Fairbairn | Chair | ICA Commission on Education and Training | UK ●

Generalisation and Multiple Representation

generalisation.icaci.org/

Workshop in Istanbul, Turkey

The 15th ICA Generalisation Workshop took place in Istanbul from 13-14 September 2012, co-organised with EuroSDR Commission 4 "Data Specifications". During the Workshop new challenges and solutions were discussed in the domain of automated generalisation for on demand mapping and the changing context of map use. The Workshop attracted around 30 participants and consisted of 5 sessions and 15 presentations. The following topics were discussed in detail:

- Process modelling and shared semantics for on demand mapping
- Data structures and handling of user generated content



Participants of the 15th ICA Generalisation Workshop in Istanbul, Turkey | Photograph courtesy of Dirk Burghardt

- Generalisation of schematic maps
- Workflow and production systems for topographic data
- Generalisation algorithms

Short paper and slides are available from the Commission website. A longer discussion within one of the break-out sessions triggered a common initiative to organise an NMA specific symposium in 2013.

NMA Symposium in Barcelona, Spain

A NMA Symposium, co-organised with the EuroSDR Commission on Data Specifications, is planned on the topic *Designing MRDB and multi-scale DCMs: sharing experience between NMAs*. The Symposium will take place between 21-22 March 2013 and will be hosted by the Institut Cartogràfic de Catalunya, Barcelona. During the symposium participants will get the opportunity to present production workflows and solutions based on the utilisation of MRDB. Besides presentations, time will be available for formal and informal discussions around the current practices, tools and software products. In addition common needs and challenges will be identified that could be passed to the industry on the one hand and researchers on the other. Finally the role of INSPIRE will be discussed with respect to the topic of MRDB and multi-scale DCMs. For more information visit our website's "Next events" section.

Workshop and Tutorial in Dresden

The 16th ICA Generalisation Workshop will take place in Dresden between 23-24 August 2013, prior to the ICC 2013. The Workshop will be co-organised with the ICA Commission on Map Production and GeoBusiness. A first call has been distributed and is available from our website. Furthermore, on 25 August 2013 the Commission will offer a full day tutorial on *Automated Generalisation* for new PhD students, as well as interested cartographers.

Dirk Burghardt | Chair | ICA Commission on Generalisation and Multiple Representation | Germany ●

Geospatial Analysis and Modeling

sites.google.com/site/commissionofica/

Currently we are working on two projects. The first concerns a special issue on geospatial analysis of volunteered geographic information with the international journal *Computers, Environment and Urban Systems*. The other involves organisation of the ICA Workshop on Street Network and Transport (sites.google.com/site/icaworkshop2013/) between 23-24 August 2013 as a pre-conference workshop in conjunction with ICC 2013 in Dresden, Germany. We welcome your active participation!

Bin Jiang and Xiaobai Yao | Chair / Vice Chair | ICA Commission on Geospatial Analysis and Modeling | Sweden / USA ●

GeoVisualization

geoanalytics.net/ica/

Recent Commission Activities

In September 2012 we had a successful workshop on GeoVA(t) in Columbus, Ohio, USA in conjunction with GIScience 2012. Slides from all 16 presentations are available at [geoanalytics.net/GeoVA\(t\)2012/](http://geoanalytics.net/GeoVA(t)2012/). Nine selected papers are currently under review for a special issue of the *Information Visualization* journal.

The IEEE VisWeek 2012 held in Seattle, Washington, USA between 14-19 October 2012 had a record-breaking number of attendees – over 1,000. Ten selected Visual Analytics Science and Technology (VAST) papers are published in IEEE *Transaction on Visualization and Computer Graphics (TVCG)*. In 2013, all VAST papers will be included in IEEE *TVCG*.

Both conferences, InfoVis and VAST, had a number of exciting papers related to geovisual-

zation and spatio-temporal analysis. Interested people are welcome to browse IEEE digital library for details: www.visweek.org/year/2012/info/call-participation/welcome.

Future Plans

We are organising the next GeoViz workshop in March 2013 in Hamburg (www.geomatik-hamburg.de/geoviz/). We have arranged a post-workshop special issue of the *International Journal of Geographical Information Science*.

The ICA Commissions on Cognitive Visualization, GeoVisualization, and Use and User Issues organize a joint ICC 2013 pre-conference workshop on *Eye tracking: why, when, and how?* The Workshop will be held between 23 (noon) and 24 August 2013 at Dresden University of Technology, Germany. For the data analysis challenge, the organizers will provide three real eye-tracking datasets, together with analytical tasks, several months before the Workshop. Details will be provided on the Commission's website.

Gennady Andrienko | Chair | ICA Commission on GeoVisualization | *Germany* ●

History of Cartography

www.ichistcarto.org/

Symposium in Budapest, Hungary

The ICA Commission on the History of Cartography held its 4th International Symposium at the Eötvös Lorand University in Budapest, Hungary from 28-29 June 2012. The Symposium was organized by the Commission in collaboration with Dr Zsolt Török of the Department of Geography and Geoinformatics of this University. Much assistance was also received from Professor László Zentai, Head of the Department and Secretary General and Treasurer of ICA.

Participants of the ICA Commission on the History of Cartography Symposium in Budapest, Hungary | *Photograph courtesy of Elri Liebenberg*



On Wednesday 27 June 2012 a special pre-symposium event, entitled *Cartography from Three Continents*, was organized by the Department of Geography and Geoinformatics at the ELTE Lagymányosi Campus of the Eötvös Lorand University. The academics who had been invited to speak at this opportunity, were:

- Professor Ferjan Ormeling (the Netherlands) – *Current Issues on Geographical Names: UNGEGN report to ICA*
- Professor Paulo Menezes (Brazil) – *Infrastructure of Spatial Data in Brazil*
- Professor Elri Liebenberg (South Africa) – *South Africa's contribution to 20th century cartography*

The Symposium was attended by approximately 50 people. The majority of participants were from Europe (Austria, Belgium, Croatia, Czech Republic, France, Germany, Hungary, Romania, Switzerland) but others came from as far afield as the USA, the UK, Brazil, Japan, and South Africa. The general theme of the Symposium was *Exploration, Discovery, Cartography*. Although the Commission is primarily interested in cartographic endeavours during the 19th and 20th centuries, cartographic activities during earlier centuries usually formed the background for later developments and were also considered important. A total of 24 papers organized into eight sessions were presented. Eleven delegates presented posters.

To complement the Symposium, a special Map Exhibition was organised at the University Library which is also the country's oldest public library dating back to 1562. The Library's collection contains more than 3,6 million volumes. As the principal repository of the Eötvös Lorand University, the Library holds extensive cartographic treasures. The social aspect of the Symposium was well catered for with an Ice Breaker reception on 27 June and a Symposium dinner at an historic Budapest restaurant.

The Proceedings of the Symposium will be published by Springer-Verlag of Germany as the second volume in a series of books on the History of Cartography.

Elri Liebenberg | Chair | ICA Commission on the History of Cartography | *South Africa* ●

Map Design

mapdesign.icaci.org/

Commission Activities

The Commission on Map Design continues to grow its outreach and establish its research agenda. Design has never been more important as a major component that shapes the effectiveness of the stories we tell using maps. The value of such stories in the mind's eye of the reader is really only as good as the map's ability to conjure up the right messages. This is a truism that cartographers have followed throughout time but in this era of democratized mapping using simple mapping tools with freely available data, design is not always considered.

We continue to maintain a presence at a range of international meetings. A Commission meeting was held at the Esri International User Conference in San Diego in July 2012. Commission members also gave presentations at the British Cartographic Society Annual Symposium in June (some presentations are available through the Commission web site) and also at the GeoCart'2012 Conference in Auckland, New Zealand in August. Design was also a focus of a pre-GeoCart'2012 workshop when participants explored the range of possibilities for creating meaningful thematic maps and how design plays an important part in shaping the message of the map. Over the two days, the story of which nations had been most successful in the London 2012 Olympic Games changed dramatically, simply due to the different mapping techniques applied to the same dataset.

The Commission co-sponsored a range of sessions at the North American Cartographic Information Society (NACIS) meeting held in Portland Oregon in October 2012. The *Aesthetics of Mapping* forum was a cross-disciplinary discussion led by participants with various backgrounds in cartography, economics, and the humanities. Forum leader Aileen Buckley (Esri) began with an overview of four key guidelines and rationales for aesthetics in cartography: iconography, design principles, tools and techniques, and the idea of maps as both destinations and portals. The word "aesthetic" was derived from the Greek word for "perception." George McCleary (University of Kansas) analyzed the meaning and importance of aesthetics by looking beyond map layout and design and focused instead on its psychological aspect. A large component of aesthetics is > 12

informational and graphical fidelity – how you show something in sync with what you are showing. This along with form, colour, texture, and optics unifies the design and makes the map “look right and work”. Johannes Moenis (University of Redlands) stated that maps must do three things: represent data accurately, show location, and be visually attractive. However, these three things cannot be accomplished simultaneously and it is the manner in which they are balanced that creates an aesthetically pleasing map. We should be drawn into a map because of its beauty and then read it because we want to know where the beauty comes from. During commentary, Nathaniel Vaughn Kelso offered his definition of aesthetics as the magic that happens when you spend a lot of time polishing and finishing a map. It is indisputable that aesthetics are important, but at the same time there is neither agreement on a definition of aesthetics nor on what makes a map “beautiful”.

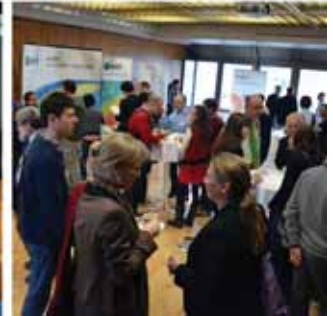
Daniel Strebe (Mapmathematics) addressed the utility of maps in the modern world and made the claim that maps have moved from the centre to the periphery of source information and presentation medium. The information maps supply is available elsewhere in more accurate forms; maps have maintained their rhetorical power, but have lost their authoritative power. It is always important for cartographers to keep their audience in mind when mapping, but they need to abandon their quest for expanding their audience through obsessive simplifying and minimising and keep more of what’s important to the people who will use their maps. The sessions provided a great opportunity to explore aesthetics as part of map design and to establish some sort of agenda for future work and discussion. This, we hope, will become a feature of the Commission’s work over the coming period.

In November, *The Cartographic Journal* published a Special issue which came out of the 2012 Association of American Geographers (AAG) meeting in New York. The papers were part of sessions co-convened by the Commissions on Cognition Visualisation and Map Design. This Special Issue brings together a range of key papers focusing on important areas of contemporary cartography.

Looking ahead, there are plans in the coming months to hold a session at the 2013 AAG meeting in Los Angeles, co-convened with the ICA Commission on Neocartography. Additionally, the Commission is looking ahead to the ICC 2013 in Dresden as a point to take stock of our progress to date and run both a pre-conference workshop and a series of map design themed sessions. Please visit our website and sign up to receive updates on the work of the Commission. If you have any ideas you can contact us through the website.

Kenneth Field | Chair | ICA Commission on Map Design | USA ●

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SOMAP 2012 impressions | Photography Markus Jobst

Map Production and GeoBusiness

mapproduction.icaci.org/

Symposium in Vienna, Austria

The First Symposium on Service-Oriented Mapping (SOMAP) 2012 took place in Vienna, 22-23 November 2012. It was hosted by the ICA Commission on Map Production and GeoBusiness. The Austrian Federal Office for Metrology and Surveying provided the venue.

SOMAP 2012 was co-organized by further five ICA Commissions on Atlases, Map Projections, Maps and the Internet, Open Source Geospatial Technologies and Use and User Issues. Members of these commissions actively participated in the symposium.

SOMAP 2012 was a multidisciplinary event, ranging from computer science to geobusiness. Its aim was to bring together various stakeholders in the area of Service-Oriented mapping, such as data producers, mapping agencies and companies, infrastructure providers, software developers, cartographers, and artists, in order to discuss the influence of new production environment, i.e. the networked spatial infrastructure and its service-oriented distribution, on map production and explore current perspectives on the new paradigm in research and

development in cartography.

Some 140 delegates participated in the symposium and actively discussed service-oriented mapping issues and challenges. Fifty speakers shared their ideas, research results and pragmatic experiences with the audience. Four keynote speakers: Athina Trakas (OGC), Paul G Hardy (Esri), Antti J. Jakobsson (EUROGEOGRAPHICS) and Alessandro Mulloni (Augmented Reality) set the tone for presentations and discussions that followed. They highlighted the synergies between standards, modern map production techniques and collaboration within trans-national map models and the need for visionary map applications for augmented reality.

The symposium started with a short welcome address by Werner Hoffmann, CEO of the Austrian Federal Office for Metrology and Surveying, and Georg Gartner, President of the ICA. In the following talk Markus Jobst, Symposium Director, explained the joint organisation of the event and introduced the initial idea behind SOMAP 2012.

The symposium program was split into seven sessions. The first session *Service-Oriented Map Production* covered several aspects of SOMAP including the definition of SOA as well as intelligent GIS and the European INSPIRE geoportals.

The second session covered general themes including various views on SOMAP like the question of a “good” map design, experiences with crime mapping or the digital preservation audit.

The third session *Service-Oriented Atlases* combined three examples of digital atlases that make use of Service-Oriented Architecture. This session served as a crosslink to the ICA Commission on Atlases meeting, in which twelve speakers presented the latest published atlases.

The fourth session on *Case Studies of Service-Oriented Map Production* presented actual examples of Service-Oriented mapping with themes ranging from base-maps to drug maps and trans-national combined map models.

The fifth session *Geobusiness* focused on the new business models and business needs that evolve with Service-Oriented Mapping as well as highlighted non-technological aspects of Service-Oriented Map Production.

The sixth session on *Advanced Functionality* covered actual research projects of specifically selected service examples reaching from labelling in 3D environment to comprehensive 3D maps and software frameworks for cartographic visualization.

The last session *Map Services and Performance* added selected views on performance testing, accessing big data online and methodology for location-aware visualization.

The *Service-Oriented Mapping 2012* symposium proceedings were published by Jobstmedia, Vienna (www.jobstmedia.at). They include a cookbook on Webmapping and GeoWebServices, an introduction to Service-Oriented Mapping with the help of twelve hands-on tutorials. These tutorials were provided by the ITC, Enschede and the Vienna University of Technology and contain an introduction to HTML and SQL to GeoWebServices, OpenLayers, QGIS and PostGIS.

The proceedings will be available from the SOMAP website (somap.cartography.at) as well as from the ICA Commission on Map Production and GeoBusiness website.

Markus Jobst | Vice Chair | ICA Commission on Map Production and GeoBusiness | *Austria* ●

Map Projections

ica-proj.kartografija.hr/

Commission Activities

The first official meeting of the ICA Commission on Map Projections was held at the 4th International Conference on Cartography and GIS in Albena, Bulgaria, 18-22 June 2012. The conference was organised by the Bulgarian Cartographic Association and the University of

Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria. Prof Milan Konečný served as President of the International Organizing Committee and Prof Temenoujka Bandrova as President of the Local Organizing Committee.

It was a superbly organized conference with about 150 participants from all over the world. Several ICA Commission had their meetings in Albena, including our Commission. The meeting was attended by 13 people including Lynn Usery (Vice Chair) and ICA EC liaison Prof Paulo Menezes. At the meeting I presented the Commission's Operational Plan 2011-2015, my contribution to the Mercator's 500th anniversary celebrations and finally the agenda for the Commission's future work on the choice of a map projection.

In various publications on map projections, one can find a great variety of map projections to choose from. A well-chosen map projection has appropriate characteristics whereby extreme distortions are minimised and the map properties match the purpose of the map itself. Yet, a map projection may have none of these general properties but still be satisfactory, or it can be widely used despite being considered a poor choice for a particular map. Three small but valuable publications on the subject are:

- Arthur H Robinson and the Committee on Map Projections (1986), *Which Map is the Best? Projections for World Maps*, Special Publication No 1 of the American Cartographic Association, American Congress on Surveying and Mapping, Falls Church, Virginia.
- Arthur H Robinson and the Committee on Map Projections (1988), *Choosing a World Map: Attributes, Distortions, Classes, Aspects*, Special Publication No 2 of the American Cartographic Association, American Congress on Surveying and Mapping, Bethesda, Maryland.
- Arthur H Robinson and the Committee on Map Projections (1991), *Matching the Map Projection to the Need*, Special Publication No. 3 of the American Cartographic Association, American Congress on Surveying and Mapping, Bethesda, Maryland (also available as e-publication of the Cartography and Geographic Information Society from courseware.e-education.psu.edu/projection/).

Although none of these publications is new, they are very informative and educational. The first two are sold out and the third one is available in digital format only. I proposed to take these publications as a model, modify where necessary, and publish a book on map projections. The book should be prepared by experts, but with the intention to serve non-experts too.

The meeting also featured presentations by Lynn Usery on *The Web Mercator Projection, The Legacy Continues into the Electronic Age*, and Ana Kuveždić Divjak on the *National and*



E Lynn Usery delivers a talk on Mercator projection at the 4th International Conference on Cartography and GIS in Albena, Bulgaria | *Photograph courtesy of Miljenko Lapaine*

Affiliate Members of the ICA on a New Web Map.

The next Commission meeting took place at AutoCarto 2012 in Columbus, Ohio, USA (see report by Lynn Usery below). We then met between 22-23 November 2012 at the Symposium on Service-Oriented Mapping (SOMAP), organized by the ICA Commission on Map Production and GeoBusiness, in Vienna.

I would like to ask for your contribution to the Commission project on the choice of map projections by writing a chapter. If you know of any interesting and useful reference about the topic or have any question, please feel free to contact me.

Miljenko Lapaine | Chair | ICA Commission on Map Projections | *Croatia* ●

AutoCarto 2012 Session

The International Cartographic Association (ICA) Commission on Map Projections sponsored a session of papers at the AutoCarto 2012 International Symposium on Automated Cartography held in Columbus, Ohio, USA, 16-18 September 2012. The session highlighted some of the latest map projections problems and advances in basic research. The session began with a presentation on a new Space Oblique Conic projection that was developed by Liucheng Ren, Keith C Clarke, and Chenghu Zhou of the University of California at Santa Barbara. The projection is optimized for side-looking synthetic aperture radar images. A second presentation by E Lynn

Usery of the US Geological Survey addressed issues with the Web Mercator Projection and its crossed heritage of coordinate transformations based on the Mercator formulas for the spherical representation of the Earth, but applied to latitude and longitude coordinates from the World Geodetic System 84 (WGS 84) ellipsoidal reference framework. This presentation introduced the need for changing projections dynamically in the Web environment, a topic which was directly addressed by Bernhard Jenny of the University of Oregon with his seminal breakthrough research on adaptive map projections. Professor Jenny demonstrated Web accessible software that changes projections based on scale or latitude, allowing preservation of characteristics, such as area and shape (conformality), under user control. This presentation was followed by Michael Finn of the US Geological Survey demonstrating the use of high performance computing technology, specifically parallel and grid computing to support the complex computations of map projections and the large data volumes being used in the Big Data science paradigm. Although one of the oldest areas of cartographic research, map projections continue to be relevant and critical to science and society in the Internet era and the Commission on Map Projections provides a forum for research and education about them under the umbrella of the ICA.

Lynn Usery | Vice Chair | ICA Commission on Map Projections | USA ●

Mapping from Remote Sensor Imagery

mailer.fsu.edu/~xyang/ica/

Commission Activities

The International Symposium on Geomatics for Integrated Water Resources Management (GIWRW 2012) was successfully held in Lanzhou, China, 19-21 October 2012. The symposium covered a variety of topics ranging from spatial data handling, water resources inventory and simulation, water resources management information systems, water quality control and improvement, and water resources services. The symposium received a total of 201 submissions and had a total of 187 participants from 12 countries including Australia, Belarus, Canada, China, Malaysia, Singapore, Switzerland, Ukraine and United Kingdom.

GIWRW 2012 was co-sponsored by International Cartographic Association (ICA), IEEE Geoscience and Remote Sensing Society (GRSS), and International Association of Hydrological Sciences (IAHS). Dr Haowen Yan from Lanzhou Jiaotong University, China served



International Symposium on Geomatics for Integrated Water Resources Management (GIWRW 2012) Opening Session, Lanzhou, China | *Photography Haowen Yan*

as the Symposium Chair. Dr Jonathan Li (Vice Chair of the ICA Commission on Mapping from Remote Sensor Imagery) served as Chair of the Scientific Committee of GIWRW 2012. Dr Xiaojun Yang (Chair of the ICA Commission on Mapping from Remote Sensor Imagery), Dr Yalin Liu (Vice President of ICA), Dr Bin Jiang (Chair of ICA Commission on Geospatial Analysis and Modelling), and Dr Julian Smit (Representative of South Africa for the ICA Commission on Mapping from Remote Sensor Imagery) served in the Scientific Committee.

In addition to GIWRW 2012, ICA is co-sponsoring two other conference events:

- International Conference on Computer Vision in Remote Sensing (CVRS2012), 16-18 December 2012, Xiamen, China (cvrs2012.xmu.edu.cn); Dr Jonathan Li serves as a conference chair, and Dr Xiaojun Yang serves in the CVRS2012 Scientific Committee
- The Fourth International Conference on Earth Observation for Global Changes (EOGC2013), 5-7 June 2013, Toronto, Canada; Dr Jonathan Li and Dr Xiaojun Yang will lead the Scientific Committee

Xiaojun Yang | Chair | ICA Commission on Mapping from Remote Sensor Imagery | USA ●

Maps and Graphics for Blind and Partially Sighted People

Commission Activities

Between 27-28 August 2012, the ICA Commission on Maps and Graphics for Blind and Partially Sighted People organized a meeting in Santiago de Chile. The meeting was attended by Alejandra Coll Escanilla (Chair), Waldirene Ribeiro do Carmo (Vice Chair), Edwin Hunt (Technical Secretary) and Commission members Jennifer Pinto and Teresa Barrientos (current Chief Coordinator of the Working Group on Tactile Cartography of the Pan American Institute of Geography and History (PAIGH-OAS)).

Commission Chair updated members on the progress with the work plan proposed by the ICA Executive Committee at the Vienna meeting in November 2011 and associated Commission commitments. The *Tactile Cartography and Disability* book, authored by Teresa Barrientos Guzmán and sociologist Victor Ramirez Huentelemu (CECAT), is in its final stage of preparation for publication by the UTEM PAIGH. The new database of international researchers and professionals in visual impairment being built by the Commission and linked to cartography and the earth sciences, will be extended to cover subjects related to the Special Educational Needs in general, such as people with learning disabilities, deaf and handicapped, among others.

Our meeting coincided with participation in the IV International Meeting of the Research Project of PAIGH-OAS *Generation touch mapping and learning materials for the understanding of global warming and its relation to natural events* organized by the Metropolitan Technological University and attended by researchers from Argentina, Brazil, Chile and Peru.

The following are 2012 initiatives in the field of visual and hearing disabilities organised, among others, by

- Tactile Cartography Center, Department of Mapping and Design Department, Universidad Tecnológica Metropolitana de Chile (UTEM)
- Department of Geography, University of Sao Paulo, Brazil
- Department of Geography, University of Chile
- Department of Cartography, University of Santa Fe, Argentina
- Special Basic Education Center for Blind Children (CEBE) *Nuestra Señora del Carmen*, Peru

Workshop for Children

At the 26th Children's Book Fair and Youth in Santiago de Chile on 30 May 2012, researchers and practitioners from the Tactile Cartography Center developed a workshop for 37 blind and partially sighted children between the age of 7 and 11 and their teachers. Workshop facilitator Dr Pilar Correa referred to the experience of language as a means to

Meeting of the ICA Commission on Maps and Graphics for Blind and Partially Sighted People, Santiago, Chile | *Photograph courtesy of Alejandra Coll Escanilla*





(clockwise, from top left) Victor Ramirez Huentelemu delivers a certificate to a Workshop participant; Waldirene Ribeiro presents aluminium-based maps; tactile storybooks created by Philippe Claudet; meeting with Philippe Claudet at the University Tecnológica Metropolitana, Santiago, Chile | Image courtesy of Alejandra Coll Escanilla

understand the world and the importance of working with children with special educational needs. One of the most motivating exercises involved children exploring with their touch a set of embossed sheets representing different animals, which they later filled with clay. Teachers and students enjoyed discovering and recognizing shapes of animals.

Specialised Equipment

On 17 July 2012 the ONCE Foundation for Latin America (FOAL), delivered specialised equipment (tiflotécnico) to the Tactile Cartography Center (CECAT), thanks to the signing of an agreement between the Spanish Ministry of Education, the Fundación ONCE for Latin America (FOAL), the Organization of Ibero-American States for Education, Science and Culture (OEI), and the Chilean Ministry of Education. The equipment consisting of Text Impact Printers Braille machines, with their converters and software, became part of the *Education Resource Center for People with Visual Impairment* program to coordinate and manage CECAT and will support various activities in an area as sensitive as education for visually impaired students. This new Education Resource Center, will coordinate the specialized production of textbooks in Braille and large print, from the nursery education, to the elementary, secondary and special education. This includes resources for geographical research, mapping training, technology transfer and extension.

Training Session

In August 2012 the Commission conducted a training activity called *Tactile Cartography*,

Geography: Pupils with special educational needs. The training session was attended by professionals in Kinesiology, Psychology, History and Geography, Special Education, Psychology and Pedagogy in Technology, representing colleges, municipal corporations, school integration projects (IPPs) and universities. The participants were able to interact with other professionals, discuss challenges of various disabilities and engage in exercises and knowledge sharing. These activities helped to develop theoretical and practical training programs with the aid of latest generation of maps crafted in aluminium and then thermoformed. Participants shared and exchanged work methodologies in the teaching-learning process to cater for visually impaired students, with hearing loss or other special educational needs.

Seminar with Philippe Claudet

On 22 October 2012, the Tactile Cartography Center (CECAT) and the School of Design at the Faculty of Humanities and Social Communication Technologies Metropolitan Technological University, together with the National Public Library System (SNBP), held a seminar with Philippe Claudet (France), academic educator of children with visual impairment and founder of the *Association Les Doigts qui Révent (Fingers sounding)*. Mr Claudet gave a presentation of the educational material developed by his Association in recent years, amounting to 185 titles, 17 of them translated into seven languages. The meeting facilitated an exchange of educational experiences and interesting research concerning production of tactile books for children with visual impairments and illustrated with tactile images.

Books with Textures Workshop

Teresa Barrientos from Tactile Cartography Center and Dr Pilar Correa organized a workshop on *Signs and Activities with Books with Textures* at the 17th Conference of Education, which took place in the framework of the 32nd International Book Fair in Santiago on 29 and 30 October 2012 at the Mapocho Cultural Center. The workshops was open to teachers from different areas of basic education, preschool and differential. Participants were very interested in the workshop activities, which ended up with the production of a small book with textures.

Future Plans

The ICA Commission on Maps and Graphics for Blind and Partially Sighted People is pleased to announce a training workshop *Teaching Geography through Maps: Tactile teaching materials for teachers of pupils with SEN in Latin America* scheduled for the second half of 2013. It will be organized with the support of the Pan American Institute of Geography and History (PAIGH-OAS) and the international team of researchers from CECAT. The workshop will most likely be held in a Central American country first and then extending its location to other ICA member that wish to share this experience.

The Commission will also participate in a pre-conference Symposium organized by four ICA Commissions prior to ICC 2013. The Symposium will be held on 23 August 2013 in Dresden, Germany. We plan to share our experiences in the area of maps and mapping for blind and partially sighted people. Please visit the Joint Symposium website lazarus.elte.hu/jointsymposium2013/ for more information.

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

Maps and the Internet

maps.unomaha.edu/ica/

Commission Activities

In September 2012 a joint workshop sponsored by ICA Open Source Geospatial Technologies, Ubiquitous Mapping, and the Maps and the Internet Commission was convened. The one-day workshop was held in Columbus, Ohio USA. The workshop had presentations and work sessions for 40 participants. Many new and exciting ideas, technologies and mapping trends were presented and many participants took time to work hands on with technologies and ideas. At the end of the day many in the workshop took home with them new ideas and skills for future cartographic developments.

The SOMAP 2012 Symposium was held in

November 2012. The program had a wide range of exciting papers and topics being covered. The ICA Commission on Maps and the Internet sponsored the activities of SOMAP 2012 symposium.

Future Plans

The Commission is currently arranging for a pre-conference workshop prior to the ICC 2013 meeting. The workshop will be held in Plzen, Czech Republic the week before the ICC meeting and will include a poster session, paper presentations, social activities and cultural immersion events. Plzen is a short 240km from Dresden by car and approximate 4-hour travel time by train service through Prague. A call for posters and presentations will be sent out early in 2013. For those interested in attending, please contact Rex Cammack for additional information.

Rex Cammack | Chair | ICA Commission on Maps and the Internet | USA ●

Mountain Cartography

www.mountaincartography.org

Workshop in Taurewa, New Zealand

The ICA Commission on Mountain Cartography holds its traditional Workshops every other year, alternating with the International Cartographic Conferences (ICC). The New Zealand Cartographic Society was pleased to host the 8th Mountain Cartography Workshop at the Sir Edmund Hillary Outdoor Pursuits Centre at Taurewa, near Tongariro National Park, 1-5 September 2012. The meeting gathered 25 mountain cartographers and enthusiasts from nine countries: Argentina, Austria, Canada, Germany, Norway, Slovenia, Switzerland, USA

Participants of the 8th Mountain Cartography Workshop held in Taurewa near Tongariro National Park, New Zealand | *Photography Karel Kriz*



The Sir Edmund Hillary Outdoor Pursuit Centre at Taurewa turned to be an ideal venue for the Mountain Cartography Workshop | *Photography Karel Kriz*

and New Zealand. One needed to be very keen to come so far to the middle of a New Zealand winter! However, the weather was relatively kind, at least on the day programmed for excursions and nobody stayed in the warmth of the lodge.

The Workshop theme *Mapping Mountain Dynamics: From glaciers to volcanoes* set the mountain scene and the central focus for presentations and discussions. The Workshop opened on Saturday evening, 1 September, with an excellent presentation from Dr Harry Keys of the Department of Conservation who not only informed us of the natural and cultural context that we were in, but updated us on the devastation caused by recent volcanic explosions on nearby Mt Tongariro. The remainder of the evening was spent on catching up with friends and colleagues, enjoying a shared supper and planning the next day.

Taking advantage of the favourable weather on Sunday, all participants split into several groups, each targeting a different type of activity, from hiking, through snowboarding and ski touring to mountaineering. Many local bush

walks saw a number of international hikers enjoying lush vegetation, bird songs and the smell of bush flowers. The Mt Ruapehu's snow fields accommodated a lonely snowboarder who couldn't resist pushing his limits on the challenging piste in Happy Valley. The fearsome peaks of Mt Ngauruhoe (2287m) and Mt Tongariro (1967m) fell to a group of experienced mountaineers, who conquered their summits in gale force winds. Finally, the famous Mt Ruapehu Crater Lake saw a small group of mountaineers and ski touring enthusiast at its shores, enjoying panoramic views of Summit Plateau from nearby Dome (2672m). The day finished with plenty of talks, photo presentations and a movie taken during one of the trips.

The next three days featured 21 scheduled presentations grouped into six themes:

- Mountain Mapping
- Glacier Mapping
- User-related Studies
- Mobile Media
- Professional Cartography
- From the Ocean Floor to the Mountain Tops

In addition several unscheduled presentations and projections enriched the Workshop's programme.

The *Mountain Mapping* session took us on a journey to mid 1930's when one of the first New Zealand hiking maps was produced of the Tararua Mountains (Geoff Aitken, NewTopo). We then moved to the challenges of contemporary photorealistic representations of mountainous terrain (Dušan Petrovič, University of Ljubljana) and illustrative cartography of Mt Everest, including state of the art data capture (Martin Gamache, National Geographic Society). Finally, an innovative geographical atlas of Argentina incorporating 1:500,000 overview maps with corresponding satellite imagery was presented (Carlos Nelson, Instituto Geográfico Nacional).

A review of cartographic depiction of glacier dynamics (Roger Wheate, University of Northern British Columbia) introduced the *Glacier Mapping* session. Other presentations described semi-automated approach to

reconstructing glacier DEM based on historical maps (presented by Stephan Wondrak, ETH Zurich) and application of digital photogrammetry techniques to create a new DEM of Tasman Glacier in Southern Alps (Sebastián Vivero, University of Otago).

The last session of the day, devoted to *User-related Studies*, included presentations covering themes as diverse as the user interface for the Tyrolean Avalanche Warning Center portal (Karel Kriz, University of Vienna), evaluation of panoramic maps of Switzerland (Stefan Räber, ETH Zurich) and assessment of small scale mountain maps for an exhibition (Karel Kriz).

Following day, the programme started with the *Mobile Media* session. Georg Gartner (Vienna University of Technology) presented some wayfinding challenges in context of “emo-maps”, i.e. maps describing people’s emotions. Mobile devices attracted two studies, one on the development of mountain-related applications (Karel Kriz), the other on multimodal exploration of rugged digital terrain (Antoni Moore, University of Otago).

Professional Cartography session focused on recent developments with respect to tools and solutions in both, digital and hard copy environments. Martin Gamache talked about the use of new relief tools in production of National Geographic maps and illustrations, while Roger Smith (Geographx) demonstrated how to interpret geomorphology from suitably designed maps. The new and crisp approach to topographic mapping (Geoff Aitken) and creating our own terrain maps in digital environment (Nathaniel Kelso, Stamen Design) presentations wrapped up the session.

Tuesday afternoon was spent on recreation, mixing some walking in the rain with a visit to the Tongariro National Park Visitor Centre, and finishing off with a nice coffee at The Grand Chateau in Whakapapa Village. Despite the weather, everybody enjoyed the outing but was equally pleased to be back in the safety and warmth of the lodge for an evening meal.

The last day featured just one session – *From the Ocean Floor to the Mountain Tops* – regarded by some as the highlight of the entire Workshop. Four presentations took us on an amazing rollercoaster ride from the unseen mountains at the bottom of the Pacific Ocean near Hawaii (Tom Patterson, US National Park Service), to the climbing routes of the famous El Capitan vertical world (Martin Gamache), through the hidden and forgotten pilgrimage trails of the Athos Peninsula (Peter Howorth) and finally back to the ocean depths depicted on a new ocean floor map (Martin Gamache).

Throughout the course of the Workshop, several informal presentations were made as people found more and more things to share with others. Participants learned about combining grayscale and coloured raster without losing colour intensity or hillshade



Mt Ruapehu's Pinnacle Ridge with Mt Ngauruhoe and Mt Tongariro in the background | Photography Igor Drecki

detail (Aileen Buckley, Esri), current projects at TU Dresden concerning glacier dynamics (Benjamin Schroeter, Dresden University of Technology), the use of LIDAR technology for flood mapping (Andrew Steffert, Horizons Regional Council) and many more. Georg Gartner, President of ICA, Karel Kriz, Chair of the ICA Commission on Mountain Cartography, and Igor Drecki, Vice President of the New Zealand Cartographic Society jointly chaired the concluding session and thanked Geoff Aitken, Chair of the Local Organising Committee, and his team for superbly organised event.

The ICA Commission on Mountain Cartography held its business meeting at the Workshop on Tuesday, 4 September 2012. The minutes are available from the Commission website together with Workshop presentations. The Workshop proceedings will be published in time for the ICC 2013 in Dresden, Germany.

Future Plans

The next, 9th Mountain Cartography Workshop is planned to take place immediately before or after Easter 2014 in Banff or Lake Louise, British Columbia, Canada. Roger Wheate leads the local organising committee. The exact dates and place will be confirmed at the Commission’s business meeting during ICC 2013.

Igor Drecki and Geoff Aitken | Members | ICA Commission on Mountain Cartography | New Zealand

Open Source Geospatial Technologies

ica-opensource.scg.ulaval.ca/

First Open Source Geospatial Research and Education Laboratory in USA

The first Open Source Geospatial Research and Education (OSGeoREL) Laboratory in the USA

has been established at the Center for Earth Observation, North Carolina State University (NCSU) at Raleigh. OSGeoREL at NCSU is led by Dr Helena Mitsova and Dr Laura Tateosian. The laboratory has an established program in graduate education in geospatial information science and technology using FOSS4G and extensive research in geospatial analysis, modelling and visualization with focus on natural resources.

Dr Helena Mitsova is an Associate Professor at the Department of Marine, Earth and Atmospheric Sciences, OSGeo charter member since 2006, member of the OSGeo education and conference committees and Sol Katz award recipient. She has been actively involved in the GRASS GIS development since 1991 and together with Markus Neteler she has co-authored the first book about GRASS GIS. Dr Laura Tateosian is Research Assistant Professor at the Center for Earth Observation Her research interest focus is on visualization, human visual perception, computer graphics, geospatial sciences, non-photorealistic rendering, and human-computer interaction.

More details on the lab can be found at gis.ncsu.edu/osgeorel/.

Launch of First African ICA/OSGeo Laboratory, South Africa

The Centre for Geoinformation Science (CGIS) celebrated the official launch of the first ICA/OSGeo Laboratory in Africa at the University of Pretoria on 5 October 2012. In addition to representatives from the University of Pretoria, the launch was attended by Prof Elri Liebenberg, former Vice President of the ICA, and OSGeo Board member, Jeff McKenna. As part of the ICA/OSGeo Laboratory launch celebrations, CGIS also organised two open source geospatial workshops at the University of Pretoria. An introductory, hands-on MapServer workshop was presented by MapServer Project



Participants of the ICA Commission on Open Source Geospatial Technologies at AutoCarto 2012, Columbus, Ohio, USA | Photograph courtesy of Suchith Anand

Steering Committee Member, Jeff McKenna, and an open source geospatial software and open data workshop was presented by OSGeo Africa representative, Gavin Fleming, with assistance from CGIS students and lecturers.

Workshop at AutoCarto 2012, USA

Thanks to Michael P Finn (US Geological Survey) leadership and efforts, we ran a successful pre-conference workshop on *The Internet and Geospatial Technologies* together with colleagues from the ICA Commission on Maps and the Internet at AutoCarto 2012 in Columbus, Ohio on 16 September 2012.

There were five presentations and two small group breakout sessions. The breakout sessions were held mid-morning and mid-afternoon. The workshop participants had a choice of working on either Open Source Tools or Dynamic SLD in the morning session, or the one of three topics in the afternoon session: Multi-dimensional Geovisualization, SVG & HTML 5, or Location Based Mapping. All the presentations are available on an FTP site <ftp://ftpext.usgs.gov/pub/cr/mo/rolla/icaWorkshopAutoCarto2012>.

Suchith Anand | Chair | ICA Commission on Open Source Geospatial Technologies | UK ●

Use and User Issues

www.univie.ac.at/icacomuse/

Commission Website

Current news about the ICA Commission on Use and User Issues and its activities can always be found at the Commission website. For instance, we have recently provided access to three PhD dissertations completed by core members of the Commission containing research relevant to the Commission's domain.

Workshop in Columbus, Ohio, USA

On 16 September 2012, prior to AutoCarto 2012 Conference, the ICA Commission on Use and User Issues ran a successful workshop in Columbus, Ohio, USA, together with the ICA Commission on Cognitive Visualization. The Workshop consisted of 4 modules:

- 1a *Methods and techniques of use, user and usability research in geo-information processing and dissemination* (Kristien Ooms & Corné van Elzakker)
- 1b *Improving the usability of pedestrian navigation systems* (Ioannis Delikostidis & Corné van Elzakker)

- 2 *Designing your user study or experiment* (Amy Griffin)
- 3 *Research instrument integrity* (Amy Lobben)
- 4 *Working with the card sorting method* (Robert Roth)

The basic idea behind the modular approach is that the Workshop can be easily transferred and conducted anywhere, and new modules (e.g. on another research technique) can be added. The presentation files are accessible through the Commission website. Please contact us for more information.

Future Plans

The ICC 2013 pre-conference Workshop on *Eye tracking: why, when and how?* will be held between 23 (noon) and 24 August 2013 at the Technical University in Dresden, Germany. The Workshop is a coorganised by three ICA Commissions: Cognitive Visualization, GeoVisualization and Use and User Issues.

You are invited to participate in a hands-on workshop on how to efficiently and effectively collect, analyze, and make sense of eye movement data collected during empirical user studies. We will work hands-on with real eye-trackers and real data during the workshop and discuss issues in the group. The Workshop is intended to bring together a broad mix of researchers interested in eye movement data collection methods, ranging from the eye tracking novices who might wish to learn more about this empirical technique, to the seasoned eye tracking experts who wish to share advanced analytical approaches with other like-minded empirical researchers. Part of the program will use parallel tracks to meet the needs of both novices and experts, and a 'data challenge' will form a key component of the meeting. The deadline for submitting contributions is 1 February 2013. Please look up the details on the Commission website.

Corné van Elzakker | Chair | ICA Commission on Use and User Issues | The Netherlands ●

reports ica working groups

International Map Year

On 1 November 2012, the United Nations (UN) Regional Cartographic Conference in Bangkok, Thailand, accepted a resolution in which the International Cartographic Association (ICA) was asked to organize the International Map Year during 2015, with the support of other members of the Joint Board of Geospatial Societies (for the full text of Resolution 6, please refer to President's Report, page 3).

The ICA Working Group on International Map Year continues its involvement in this important initiative. The most recent meeting was held

in September 2012 at the AutoCarto Conference in Columbus, Ohio, USA. The next one is scheduled for ICC 2013 in Dresden, where the first version of a commemorative book planned for the occasion will be presented and a special session for national members will be held.

For a successful implementation of the UN resolution, all ICA member nations will be asked to organize national Map Days. The Map Days should be held locally by municipalities and the support of national mapping organizations, universities and geospatial industry should be sought.

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

Toponymy

Meeting and Workshop in New York, USA

During the 27th Session of the United Nations Group of Experts on Geographical Names (UNGEGN) and the 10th United Nations Conference on the Standardization of Geographical Names (UNCSGN) held between 31st July and 10th August 2012 in New York, USA, the Joint IGU Commission / ICA Working Group on Toponymy was officially presented to the distinguished delegates. The Working Paper No 06: *Establishment of an IGU Commission / ICA Working Group on Toponymy*, submitted by Prof Cosimo Palagiano (Chair – IGU), Prof Paulo Menezes (Chair – ICA), Prof Peter Jordan and Prof Ferjan Ormeling, was read in Session 4 of the Provisional Agenda on Monday, 31 July 2012. Some questions were posed from the audience, mainly about participation in the works of the Commission / Working Group and clarification on which group to approach, IGU or ICA. As far as the participation is concerned, either organisation can be contacted and it is up to individuals and their research interests which group they would like to associate with. The audience was then invited to participate in a follow-up workshop.

On 7 August 2012, the Joint IGU Commission / ICA Working Group on Toponymy held a workshop within the UNCSGN programme. Prof Paulo Menezes was the main convenor, supported by Prof Ferjan Ormeling and Prof Peter Jordan, full members of the Working Group.

The workshop attracted 15 delegates from Egypt, Korea, Japan, Turkey, Finland, Latvia and Georgia, some already members of the Working Group. Other attendees were invited to join, particularly if toponymy was

one of their research interests. The workshop participants congratulated ICA and IGU for the initiative to create such a forum that promotes the exchange of ideas and research on toponymy.

Congress in Cologne, Germany

The Joint IGU Commission / ICA Working Group on Toponymy met at the 32nd International Geographical Congress – IGC 2012, 26-30 August 2012 in Cologne, Germany. On Monday, 27 August, 17 papers were presented during two dedicated sessions. The sessions were chaired by Prof Cosimo Palagiano (IGU) and Peter Jordan (ICA) and attracted over 20 participants, including Prof Peter Raper (South Africa), Prof Hiroshi Tanabe (Japan), Prof Mauricette Fournier (France) and Prof Sungjae Choo (Republic of Korea).

Future Plans

The Cologne meeting provided an opportunity to discuss future plans and venues for the Working Group meetings. Upcoming opportunities are:

- IGU Regional Conference in Kyoto, Japan: 4-9 August 2012
- Joint meeting with the ICA Commissions on Atlases and the History of Cartography in Leipzig, Germany: 22-23 August 2013
- International Cartographic Conference in Dresden, Germany: 25-30 August 2013

In addition, the proposed meeting in Rome, Italy scheduled for May-June 2013, was postponed to March-April 2014.

Paulo Menezes | Chair | Joint ICA/IGU Working Group on Toponymy | Brazil ●

reports cartographic meetings and events

4th International Conference on Cartography and GIS

The 4th International Conference on Cartography and GIS was held from 18 to 22 June 2012 in Albena – Bulgarian summer resort and the *Pearl of Bulgarian Coast*. The resort of Albena is one of the most modern holiday towns along the Bulgarian coast. The complex lies beneath a relatively high hill and is given a particular charm by the nearby forest of Baltata, a part of which is declared a protected area.

The conference was organised by the Bulgarian Cartographic Association (BCA), the International Cartographic Association (ICA) and University of Architecture, Civil Engineering and Geodesy (UACEG). Mrs Kristalina Georgieva, Bulgarian European Union (EU) Commissioner, was again the patron of the conference and her support was very much appreciated.

150 delegates from 33 countries representing all continents participated in the event. The conference was opened by Prof Krasimir Petrov, Rector of the University of Architecture, Civil Engineering and Geodesy, who welcomed the participants and wished them a fruitful and

successful conference. The participants were addressed by Prof Georg Gartner, President of ICA, Prof Milan Konečný, Past President of ICA, His Excellency Mr Pavel Vacek, Czech Ambassador to Bulgaria, and Mr Constantine Daradanov, Honorary Consul of Denmark. Mr Paul Hardy greeted all attendees on behalf of the sponsors, which included Esri, KB Panorama, Intergraph, Bulgarian Geoinformation Company, Bulgarian Chamber of Surveyors, DataMap-Europe Ltd, and Cartographic Studio *DavGeo*. Bulgarian Geomedia, GeoConnection and Maney Publishing served as media partners of the event.

The support of ICA was impressive. Several members of the Executive Committee together with ICA Commission Chairs were present. Three of the Commissions held their business meetings during the conference, discussing their future plans.

100 reports, including ten posters, were presented at the event. Two volume Proceedings have been published, fully reviewed by the International Organizing Committee. Eight keynote speakers addressed a wide range of current and relevant topics to cartography and GIScience:

- Mr Andrei Zheleznyakov, KB Panorama, Russia: *Experience in the Implementation of Mapping Projects*

Children folk dancers at the welcome reception (top); part of astonishing entertainment at the Gala evening | Photographs courtesy of Temenoujka Bandrova





Participants of the 4th International Conference on Cartography and GIS in Albena, Bulgaria | Photograph courtesy of Temenoujka Bandrova

- Prof Georg Gartner, President of ICA: *Modern Cartography and the Role of the International Cartographic Association*
- Mr Paul Hardy, Esri: *Multi-scale Cartography: Maps, tools and models*
- Mr Claudio Mingrino, Intergraph: *Managing Risk from Landslides to Tunneling: High-precision environmental and infrastructure monitoring*
- Prof Hui Lin, Hong Kong: *Virtual Geographic Environments: Feeling it in person and knowing it beyond reality*
- Prof Deren Li, China: *Conceptualizing the Chinese National Disaster*

The last two presentations were delivered by Prof Victor P Savinykh, Russian Cosmonaut, and David Wortley, UK. David presented his new book *GADGETS TO GOD: Reflections on our Changing Relationship with Technology*.

Within the conference programme, a two-day seminar on Early Warning and Crises Management was organized by Prof Milan Konečný and supported by Masaryk University in Brno, Czech Republic.

Several social events were organized, including performances by two children folklore groups. The welcome reception was sponsored by Esri and KB Panorama. Mr Andrew Zhelyaznikov and Mr Wojtek Gavetski (Esri USA) welcomed the conference participants. Guests and sponsors of the conference received gifts of carved old Bulgarian houses made by master Oreshak. The gala evening was attended by over 100 participants. Rich folklore program, together with other modern dance entertained the guests. The highlight of the evening was the dance of dancers, who astonished the participants with their amazing performances. A chamber music quartet *Albena AD* played a 30 minutes programme enjoyed by everybody. The conference finished with a short trip entitled *Looking to the Past*. The

participants visited the Archaeological Museum in Varna, Panagyurishte Golden Treasure, Fossil Forest, and Aladzha Monastery with the light show depicting the history of monasteries in Bulgaria.

Temenoujka Bandrova | Bulgarian Cartographic Association | Bulgaria ●

GeoCart'2012 Conference

The 6th National Cartographic Conference, GeoCart'2012, and the 2nd ICA Regional Symposium on Cartography for Australasia and Oceania, were held at the University of Auckland, New Zealand, between 29-31 August 2012. The conference was organised by the New Zealand Cartographic Society with support of the School of Environment, University of Auckland.

GeoCart'2012 attracted a strong selection of delegates from New Zealand and overseas, and was the focus for a fiesta of Southern Hemisphere cartographic activities, being preceded by the *Map Design with ArcGIS: Thematic Cartography* workshop, and was followed by the 8th Mountain Cartography Workshop (see report on page 16).

The programme delivered 38 keynote, paper and poster presentations, as well as the National Cartographic Exhibition, GeoExpo'2012 – a commercial exhibition and a memorable social programme, including Welcome Reception and Gala Dinner with live entertainment provided by University students.

Tom Patterson (US National Park Service) opened the conference with a keynote address showcasing his amazing *Natural Earth* data, a

public domain world raster and vector dataset (www.naturalearthdata.com) – a spectacular resource for all cartographers wanting to produce beautiful small scale maps. The focus then moved to Atlas cartography, and it was refreshing to see that the concept of National and School Atlases is still alive and well in Switzerland! Roger Smith (Geographx NZ Ltd) gave an insight into the production trials and tribulations in order to make the world's largest atlas, *EARTH Platinum* (geographx.co.nz/portfolio/earth-platinum-atlas/). The other session focused on the application of GIS, remote sensing and spatial analysis in disease visualisation, urban hydrology modelling, viticulture mapping and assessment of tourism impact on forests.

The afternoon session was kicked off by Aileen Buckley (Esri), who looked at recent examples of cartography, and how we as cartographers are coming to terms with visualizing the proliferation of location-based data generated by modern living (i.e. smartphones, facebook, etc.). We then ranged from subjects as diverse as a map of how people have died in the Grand Canyon to the geology of Antarctica – with a sprinkling of GIS analysis in between! Other themes included voluntary mapping of monasteries and pilgrimage routes on Athos Peninsula in Greece, and current trends and challenges of aeronautical charting. At the same time, the spatial analysis theme continued in the other session with talks as

Tom Patterson's keynote address on *Natural Earth I-II-III* at the opening session of GeoCart'2012 | Photography Marney Brosnan



reports cartographic meetings and events cont...

intriguing as the use of public participatory GIS for understanding landscape values, application of fuzzy multi-criteria analysis for siting of medicinal vegetation, investigation of patch connectivity for brushtail possums and mapping endemic dolphins.

The next day started with an interesting keynote from self-confessed 'Mapsmith' Roger Smith, and then moved into the NZ Government mapping, with Geoff O'Malley and Andrew Ferrel (Land Information New Zealand) illustrating the past successes and future challenges faced by the New Zealand national mapping agency. Ken Field (Esri) entertained the audience with his provocative and superbly illustrated talk on re-imagining the art of cartography, while Anthony Robinson (Pennsylvania State University) talked about the challenge of designing map symbols for emergency management.

In the afternoon Prof Georg Gartner (ICA President) outlined the role of the ICA in modern cartography, followed by a thought stimulating Panel discussion with the keynote speakers. The day was rounded off by a fabulous Gala Dinner with great entertainment.

David Fairbairn began the final day with some interesting perspectives on how cartography is incredibly relevant in today's world, although there was a fair amount of debate over the 'Art' of cartography. William Cartwright talked about individual geo-narratives, following a WW1 Australian soldiers' journey to battle, after which we went on to a more recent conflict in Vietnam with Amy Griffin's progress report on how the mapping of Australia's involvement is getting on. Mairead de Roiste gave us some insight into the role of participatory mapping for land management, while other talks showcased the visualization of 3D data.

The final session was not only a look at the future, with talks about the challenges of online learning and virtual/augmented reality, but also the past with an update on how the *GeoData-Hub* project to digitise and serve up online every single published government map ever produced in New Zealand was progressing.

At the New Zealand Cartographic Society General Meeting held during the conference, Geoff Aitken was awarded Life Membership for his contribution to cartography in New Zealand and internationally. Geoff is a foundation member of the Society (established in 1971) and only the sixth recipient of this prestigious award. On behalf of the International Cartographic Association, President Georg Gartner and Past President William Cartwright congratulated Geoff on receiving the award.

Overall, GeoCart'2012 attracted 62 attendees from eleven countries. It provided a fantastic opportunity to renew old acquaintances, and make lots of new ones!

Tim Nolan and Igor Drecki | New Zealand Cartographic Society | New Zealand ●



GeoCart'2012 in pictures: (top row from left) Aileen Buckley, Geoff Aitken, one of the plenary sessions; (middle row) Ken Field, Georg Gartner, Michelle Cooper, David Fairbairn; (bottom row) William Cartwright, Prof Cartwright addresses guests at GeoCart'2012 Gala Dinner, Antoni Moore | Photography Marney Brosnan

AutoCarto 2012



The Cartography and Geographic Information Society (CaGIS) held its biennial AutoCarto International Research Symposium in Columbus, Ohio, USA, 16-18

September 2012. The meeting partially overlapped with the GIScience 2012 meeting, also held in Columbus, Ohio.

The AutoCarto research symposium included 18 sessions of research papers with a range of topics, including visual analytics, geovisualization, mobile and web mapping, generalization, geospatial modeling, ontology and semantics, volunteered geographic information, analytical cartography, and map use and design. The ICA Commission on Map Projections also sponsored a special session of papers highlighting research from members of the Commission. Presenters at the meeting came from twenty-three different countries, including Algeria, Australia, Belgium, Brazil, China, Denmark, France, Germany, Hungary, Japan, the Netherlands, New Zealand, Russia, Sri Lanka, Switzerland, the United States, and many other countries. In all, sixty-five research papers and eleven posters were presented at the meeting.

Also at the symposium, attendees were treated to plenary talks by Mark DeMulder (Director of the US Geological Survey's National Geospatial Program), Sara Fabrikant (University of Zurich Geographic Information Visualization and Analysis Unit), and a special presentation

by Manfred Buchroithner introducing the ICC 2013 meeting in Dresden, Germany. CaGIS also partnered with the GIScience organizing committee to present a special joint panel session with Sara Fabrikant, Alan MacEachren, Stephen Hirtle, Menno-Jan Kraak, Anne Ruas, and Terry Slocum discussing key research questions and research threads that can only be solved by a joint effort of cartography and GIScience.

In conjunction with the meeting there were three International Cartographic Association (ICA) workshops and working groups that were held during the AutoCarto symposium. The ICA Commission on Maps and the Internet and the ICA Commission on Open Source Geospatial Technologies conducted a Workshop on Internet and Geospatial Technologies; the ICA Commission on Cognitive Visualization and the ICA Commission on Use and User Issues conducted a Workshop on Designing and Conducting User Studies; and the Working Group on the International Map Year held a meeting.

Harold Moellering and Manfred Buchroithner at AutoCarto 2012 research symposium | Photography CaGIS



reports cartographic meetings and events cont...

The CaGIS Board of Directors was delighted to welcome several members of the ICA Executive Committee and had many opportunities to meet with its members during the CaGIS welcome reception and evening social, as well as during a special pre-symposium dinner organized by Harold Moellering in downtown Columbus.

The CaGIS Board and the US National Committee to the ICA (USNC) is also pleased to announce that we will be hosting the 2017 ICA International Cartographic Conference in Washington, DC. We are excited to be bringing the international cartographic community to our nation's capital in 2017!

Sarah Battersby and **Greg Allord** | Cartography and Geographic Information Society | USA ●

Open Source GIS and WebMapping Workshop

Between 20-21 November 2012, a hands-on workshop *Open Source GIS & WebMapping* was held in Vienna, Austria. This workshop was tailored especially for members of the United Nations staff and other international organisations and NGO's. The goal was to introduce participants to the possibilities and pitfalls of using Open Source applications for GIS and webmapping. Some 25 participants from almost 20 different countries were registered, all interested in this technology, but without much experience in its application.



Open Source GIS and WebMapping hands-on workshop in Vienna, Austria | Photography Markus Jobst

The workshop started with an introduction session on Modern Cartography, with a focus on Open Source GIS and webmapping technology. The remaining time was spent on a set of exercises that guided the participants in setting up a webmapping site using OpenStreetMap data, adding their own data using desktop QGIS application, serving that data as a Web Map Service using Geoserver and MapServer WMS, and finally bringing it all together on an interactive website using OpenLayers. We used free and Open Source applications from the OSGEO LiveDVD. This initiative from the Open Source Geospatial Foundation is a self-contained bootable DVD/USB based on the Xubuntu operating system, that allows trying a wide variety of open source geospatial software without installation.

The group worked enthusiastically for two days, interspersed with lively discussions on the possibilities of using this Open Source web technology in their daily work.

The workshop was organised and facilitated by Barend Köbben (ITC, University Twente),

who put together the course materials. The materials, covering more content than actually delivered at the workshop, were collated to form a Cookbook – a self-guided resource for learning the theory and practice of Open Source WebMapping. The Cookbook (100 pages) was included in the Proceedings of the International Symposium on Service-Oriented Mapping (SOMAP) 2012 held immediately after the workshop.

The workshop was hosted by the Institute of Geoinformation and Cartography at the Vienna University of Technology, and supported by Esri, OSGEO and the ICA Commission on Open Source Geospatial Technologies. The Commission has been actively promoting the use of Open Source software in a series of workshops such as this, and we are planning to organise more of them in the future. More details on this initiative can be found on the website at kartoweb.itc.nl/kobben/OSGEOcourses.html.

Barend Köbben | ITC - University of Twente | The Netherlands ●

international qualification in cartography

An important aspect of the ICA's mission is the promotion and support of education and training initiatives in Cartography and GIScience. The Master of Science (MSc) in Cartography is a new degree introduced in Europe in 2011 and offered entirely in English language (www.cartographymaster.eu). ICA endorsed this development by providing a Letter of Support on 20 September 2010. Immediate Past President of ICA Professor William Cartwright describes the program as "a unique offer when compared to other international programs".

The MSc in Cartography is a result of cooperation between three leading technical universities: Technical University of Munich (TUM), Technical University of Dresden (TU Dresden) both from Germany, and Technical University of Vienna (TU Vienna) from Austria. This cooperation and the combined cartographic expertise made it possible to create a unique and comprehensive program with excellent job employment prospects. The program aims to provide academic training of the highest standard. It focuses on the current and important research issues, such as spatiotemporal data integration, location-based map services, personalized map design and user research, design of cartographic tools, analysis and visualization of spatial data, and many others.

The program is truly international, with 14 students coming from ten different countries in 2011 intake, and 20 students from eleven countries in 2012. The 2-year program structure (see attached table) requires

Master's Programme in Cartography			Credits	Semester
Cartographic Foundations Scientific Visualization	Geostatistics Geovisualization	Image processing, Photo- grammetry & Remote Sensing	30	1 (TUM)
Theoretical Cartography Cartographic Interfaces	Location Based Services Multimedia Cartography	Cartographic publishing, Web- mapping, Geomedia Techniques	30	2 (TU Vienna)
Mobile Cartography Geodata Generalization	Georelief and Cartography GIS Applications	True-3D, Dynamic Geo-Features Radar Cartography	30	3 (TU Dresden)
Master's Thesis preparation (at one of the 3 cooperating universities)			30	4

students to spend their 1st semester at TUM, the 2nd at TU Vienna, and finally the 3rd one at TU Dresden. During the 4th semester students work on their MSc thesis at one of the three participating universities of their choice. The final qualification is a "joint degree" from the participating universities. The required mobility is a challenge for students, but at the same time a big advantage since they are exposed to different research perspectives and teaching approaches.

A proposal, supported by the ICA, to include the University of Twente (ITC) in the program is currently being considered (ITC is already involved in thesis supervision). "Such an initiative reflects the true nature of collaboration and innovation in European universities offering advanced studies in Cartography", says Professor Cartwright.

Stefan Peters | Technical University of Munich | Germany ●

calendar

february 2013

06-08: CEGeoIC 2013 : International Interdisciplinary CODATA Conference on Environmental Information and Communication | Bogotá | Colombia | www.cegeoic2013.net/

march

06-08: GeoViz_Hamburg 2013 : Joint Workshop of the ICA Commissions on Geo-Visualization and Cognitive Visualization | *Interactive Maps That Help People Think* | Hamburg | Germany | www.geomatik-hamburg.de/geoviz/

april

08-12: GeoTunis 2013 | Tunis | Tunisia | www.geotunis.org/

may

13-16: Geospatial World Forum 2013 | Rotterdam | The Netherlands | www.geospatial-worldforum.org/

june

18-21: CoastGIS 2013 : 11th International Symposium for GIS and Computer Cartography for Coastal Zone Management | *Monitoring and Adapting to Change on the Coast* | Victoria, British Columbia | Canada | coinatlantic.ca/index.php/coastgis-2013/
30-05 July: 25th International Conference on the History of Cartography | Helsinki | Finland | www.ichc2013.fi/

august 2013

22-23: ICA Commission on the History of Cartography, ICA Commission on Atlases and Joint ICA Working Group / IGU Commission on Toponymy Joint Workshop | *Historical Maps, Atlases and Toponymy* | Leipzig | Germany
23: ICA Commission on Cartography and Children, ICA Commission on Maps and Graphics for Blind and Partially Sighted People, ICA Commission on Education and Training and ICA Commission on Planetary Cartography Joint Workshop | *Sharing Knowledge* | Dresden | Germany | lazarus.elte.hu/jointsymposium2013/
23-24: ICA Commission on Cognitive Visualization, ICA Commissions on GeoVisualization and ICA Commissions on Use and User Issues Joint Workshop | *Eye Tracking: Why, When, and How?* | Dresden | Germany | www.geo.uzh.ch/microsite/icacogvis/activities.html
23-24: ICA Commission on Geospatial Analysis and Modeling Workshop | *Street Networks and Transport* | Dresden | Germany | sites.google.com/site/icaworkshop2013/
25: ICA Commission on Art and Cartography Street Game Activity | Dresden | Germany

25-30: 26th International Cartographic Conference | *From Pole to Pole* | Dresden | Germany | www.icc2013.org/

ica affiliate members

Organisations, institutions or companies wishing to support the mission and activities of the International Cartographic Association can become affiliate members. The following organisations support the ICA:

Association of Polish Cartographers |

Poland | www.polishcartography.pl
Attn: Dr Ing Joanna Bac-Bronowicz | joanna.bac-bronowicz@up.wroc.pl

Bundesamt für Kartographie und Geodäsie |

Germany | www.bkg.bund.de
Attn: Prof Dr Ing Hansjörg Kutterer | hansjoerg.kutterer@bkg.bund.de

Centro Argentino de Cartografía |

Argentina | www.centroargentinodecartografia.org
Attn: Prof Carmen Alicia Rey | cac@centroargentinodecartografia.org

Chinese Cartographic Association

(Chinese Taipei) | Taiwan-China | www.ccartoa.org.tw
Attn: Dr David Ding | ycdding@yahoo.com

Dubai Municipality |

United Arab Emirates | www.dm.gov.ae
Attn: Ali Mohammed Alameri | amameri@dm.gov.ae

East View Geospatial |

United States of America | www.geospatial.com
Attn: Kent Lee | matthew.tanaka@cartographic.com

Eko-Graf Cartographic Publishing House |

Poland | www.ekograf.pl
Attn: Roman Janusiewicz | ekograf@ekograf.pl

ESRI |

United States of America | www.esri.com
Attn: Mark Cygan | mcygan@esri.com

Faculty of Geo-Information Science and

Earth Observation (ITC), University of Twente | The Netherlands | www.itc.nl
Attn: Corné van Elzakker | elzakker@itc.nl

Faculty of Information Engineering, China

University of Geosciences | China | www.cug.edu.cn/
Attn: Assoc Prof Weihua Lin | lwhcug@163.com

Geospatial Information Authority of Japan

| Japan | www.gsi.go.jp
Attn: Miho Takagi | miho@gsi.go.jp

Indian National Cartographic Association

(INCA) | India | www.incaindia.org
Attn: Shri Rabindranath Nanda | secretarygeneralinca935@gmail.com

Institut Cartogràfic de Catalunya |

Spain | www.icc.es
Attn: Jaume Miranda i Canals | miranda@icc.es

Institut Géographique National |

France | www.ign.fr
Attn: Jean-Philippe Lagrange | jean-philippe.lagrange@ign.fr

Instituto Geográfico Nacional España |

Spain | www.ign.es
Attn: Sebastian Mas Mayoral | smas@mfom.es

Intergraph |

United States of America | www.intergraph.com
Attn: Vince Smith | vince.smith@intergraph.com

Land Information New Zealand |

New Zealand | www.linz.govt.nz
Attn: Chris Kinzett | media@linz.govt.nz

Moscow State University of Geodesy and

Cartography | Russia | www.miigaik.ru
Attn: Prof Vasily A Malinnikov | lgm@miigaik.ru

National Hydrographic Office |

India | www.hydrobharat.nic.in
Attn: Rear Admiral SK Jha, NM | info@dataone.in

National Land Survey of Finland |

Finland | www.nls.fi
Attn: Heli Ursin | heli.ursin@nls.fi

Ordnance Survey |

United Kingdom | www.ordnancesurvey.co.uk
Attn: Paul Naylor | paul.naylor@ordnancesurvey.co.uk

Polskie Przedsiębiorstwo Wydawnictw

Kartograficznych (PPWK) | Poland | www.ppwk.pl
Attn: Dr Beata Konopska | copernicus@ppwk.pl

Regional Centre for Mapping of Resources

for Development (RCMRD) | Kenya | www.rcmrd.org
Attn: Dr Hussein O Farah | rcmrd@rcmrd.org

Regional Centre for Training in Aerospace

Surveys (Rectas) | Nigeria | www.rectas.org
Attn: Prof Isi Ikhuoria | rectas@oauife.edu.ng

SuperMap Software |

China | www.supermap.com
Attn: Li Ni | lini@supermap.com

Union of Chambers of Turkish Engineers

and Architects, Chamber of Surveying and Cadastre Engineers (UCTEA-CSCE) | Turkey | www.hkmo.org.tr
Attn: Prof Dr Necla Uluğtekin | hkmo@hkmo.org.tr

United Nations Cartographic Section |

United Nations | www.un.org/depts/cartographic/english/htmain.htm
Attn: Ayako Kagawa | kagawa@un.org

United States Geological Survey |

United States of America | cegis.usgs.gov
Attn: Lynn Usery | usery@usgs.gov

University of Architecture, Civil Engineer-

ing and Geodesy, Department of Photogrammetry and Cartography | Bulgaria | www.uacg.bg
Attn: Assoc Prof Peter Penev | ppenev@gmail.com

University of Balamand |

Lebanon | www.balamand.edu.lb/english/GIS.asp
Attn: Prof Oussama Jadayel | info@balamand.edu.lb

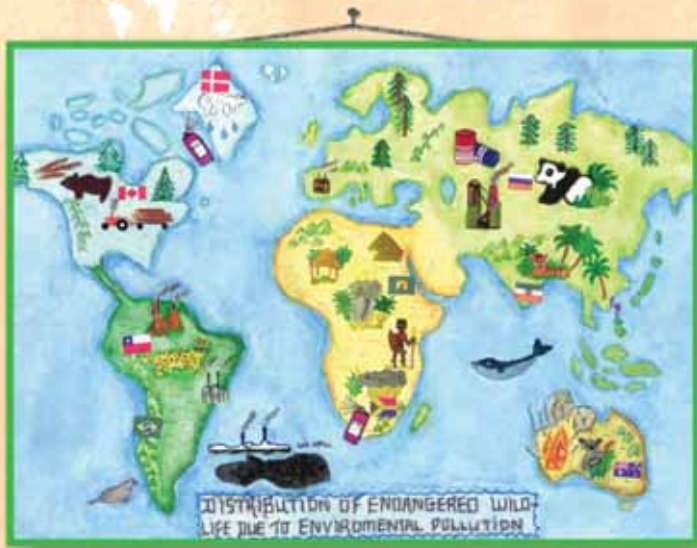
Wuda Geoinformatics |

China | www.geostar.com.cn/
Attn: Song Aihong | songaihong@geostar.com.cn

ICA welcomes new affiliate members; for more information, please contact:

László Zentai | Secretary General & Treasurer | ICA | sg@icaci.org ●

children's map gallery 1995 winners and participants



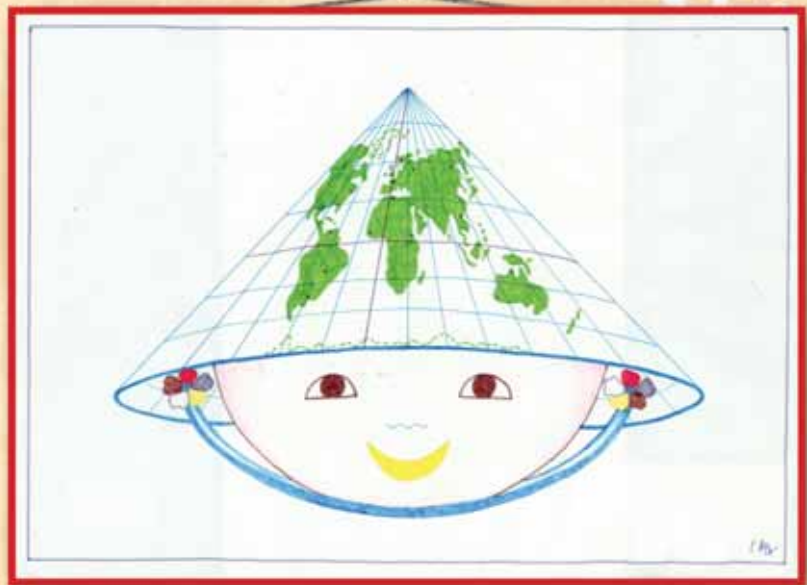
Candice Winterboer
| 14 | *Distribution
of Endangered
Wildlife Due to
Environmental
Pollution* | Lyttelton
Manor High School:
Verwoerburg |
South Africa

Rashmi Hettige | 14 | *Let Us Share
A Smile* | St Francis de Sales School:
Philadelphia, Pennsylvania | USA

Nguyen Thi Phoung Anh | 12 |
The World Map In My Cone Hat
| School Amsterdam: Hanoi |
Vietnam

Stefan Thompson
Folch | 5 | *My
World* | English
Institute: Santiago
| Chile

Wendy Meakin | 12 | *Children = The
World* | Bilanook College | Australia



This is the second part of the 1995 Barbara Petchenik Children World Map Award winners' gallery. The first part appeared in *ICA News* No 56, June 2011 under the incorrect title "2005 winners".