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NZCS: Profile of a Member Nation

ICA is an international membership organisation with connections to a range of subscribing bodies that represent their national cartographic community, including government agencies, national mapping organisations and national learned societies. An example of the latter is the New Zealand Cartographic Society (NZCS), which joined ICA to represent New Zealand in 1976. New Zealand also has an affiliate member of ICA, the Land Information New Zealand (LINZ), which includes the national mapping organisation.

PASSION FOR MAPS

Founded in 1971, NZCS is an open association for those individuals and organisations with an interest in and passion and excitement for the study, production and use of maps. It has a most diverse membership, both professionally and geographically. Volunteer members manage all Society activities. Services provided include organisation of the biennial National Cartographic Exhibition, co-ordination of the National Children's Map Competition (part of the ICA Barbara Petchenik Children's Map Award), maintenance of the Society's website, organisation of cartographic conferences, workshops, seminars and courses, support for students to attend these events, and general cartographic information and advice.

EDUCART OUTREACH

To assist GIS practitioners and promote cartography at all levels of education, the NZCS has developed the EduCart outreach programme. This comprises a modular cartography course for geospatial professionals, and the Maps for Schools project, which is concerned

with production of wall maps for primary schools. To maintain contact with members and interested others, the Society's newsletter, the Cartogram, is published several times each year and emailed to both members and a mail-out list almost as large. It is available for download from the Society's website¹.

GEOCART CONFERENCE

Every two years, alternating with the ICA's cartographic conferences, the NZCS hosts a national cartographic conference in the GeoCart series. GeoCart 2010, was held in Auckland from 1st to 4th September last year and formed the first ICA Symposium on Cartography for Australasia and Oceania². These conferences are particularly stimulating and represent the lifeblood of the Society. About a quarter of attendees come from overseas, reinforcing both New Zealand's potential as a destination and the GeoCart series as a vehicle for promoting their specialisations and ideas.

STRONG LINKS WITH ICA

Over the years NZCS has maintained a strong relationship with ICA by attending all General Assemblies since 1976 and actively participating in International Cartographic Conferences and ICA Commissions' meetings. New Zealand has been particularly successful at the International Cartographic Exhibitions, winning several cartographic excellence awards. A number of ICA events



Map of New Zealand.

have been held in New Zealand, including ICA Commission meetings, seminars and workshops, and many highly respected and notable international cartographers have been invited to these.

CELEBRATIONS

Next month the Society will host a celebration to commemorate its founding forty years ago. A celebration of New Zealand Mapping is expected to be attended by about two hundred people who have contributed to mapping over the years, and to the Society in its formative years. ◀

Geoff Aitken, NZCS President

MORE INFORMATION

1. www.cartography.org.nz
 2. www.cartography.org.nz/geocart2010
- www.icaci.org



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A Presidential Travelogue

The role of the president of any international scientific organisation is to promote both its discipline and the organisation itself. Both are best served by travelling, raising awareness and engaging with colleagues busy in their own place of work. ICA activities have regularly taken its president, resident in Australia, around the world. Described here is a typical period in the presidency during the latter half of 2010.

OUTREACH

Under the umbrella of its Commission on Education and Training, ICA ran two-week outreach education programmes to facilitate technology transfer to colleagues in Ho Chi Minh City, Vietnam in July 2010, and Jakarta, Indonesia in August 2010. The Vietnam Workshop covered Cartographic Information Systems, internet mapping, atlas production, prepress and digital printing. Presenters were László Zentai (Hungary) and Vít Voženilek (Czech Republic), whilst the president and Manuela Schmidt (Austria) contributed to the second week of the course. In Jakarta the topics covered were map projections, map and cartographic design, cartography theory, atlas cartography, toponymy, map production using GIS, prepress design and layout, and 3D GIS. Presenters were Ferjan Ormeling (Netherlands) and Gang-Jun Liu (Australia). Week 2 repeated the cartography course given in Vietnam.

AROUND THE WORLD ...

Then it was off to **Auckland** in September, where the president gave a keynote presentation and delivered a paper at GeoCart2010, joining international colleagues



President addresses Ho Chi Minh City workshop.

including Cindy Brewer (USA) and Manfred Buchroithner (Germany). On to **Montreal** a week later for an Art and Cartography Working Group workshop organised by co-chair Sebastien Caquard. Here the president joined around twenty participants to explore 'mapping Montreal from a common database'. The 'Spatial Excellence Awards' held annually by the geospatial sciences industry came next, in **Melbourne** on 15th September: a welcome engagement in home city. Later in September, ICA vice-president Zhilin Li organised a workshop at the Polytechnic University in **Hong Kong** for the Commissions on Theoretical Cartography and Ubiquitous Cartography. In attendance were both president and two Commission chairs, Alexander Wolodtschenko (Germany) and Takashi Morita (Japan), along with ICA vice-president Georg Gartner. Meetings in **Singapore** in October included the Joint Board of Geospatial Information Societies, the Permanent Committee on GIS Infrastructure for Asia and the

Pacific, and the GSDI conference: ICA was represented and papers presented by the president and immediate past-president, Milan Konecny. **Dehra Dun** in India was the venue for the thirtieth conference of the Indian National Cartographic Association (INCA), at which the president was formally invited to keynote. Later in November the ICA Executive Committee, chaired by the president, met at the AutoCarto 2010 conference in **Orlando** (report in GIM December 2010). A number of other ICA activities took place that week. Finally, a visit to **Vienna** in December provided another opportunity for ICA liaison. This list of activities evidences the international nature of organisations such as ICA: both ICA and the discipline of cartography benefit from such face-to-face interaction.

Bill Cartwright, ICA president

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www.icaci.org



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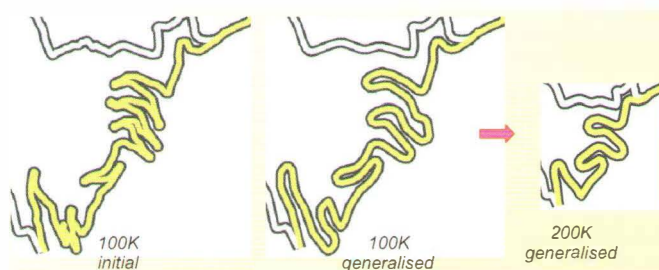
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Reconciling Multiple Representations

The last GIM report from the Commission on Generalisation and Multiple Representations was presented in April 2008. Since then, this active Commission has made regular moves to promote meetings, publications, online web forums and liaison with sister organisations, all addressing issues of multi-scale geospatial data archiving, representation and processing.



Typical example of generalisation operators, as applied to Alpine roads.

CHANGING CONTEXTS

In the past, the Commission agenda has been primarily driven by research interests of NMAs, vendors and practitioners, but recent and contemporary discussion has addressed changing contexts of map use, developing technologies in data capture and dissemination via the web and through web-based services. Thus the most recent meeting, in Zurich in September 2010, focused on scenarios such as maps over mobile location-aware devices, where generalisation is used to control variable delivery of geographic information at different scales.

GENERALISATION

One paper addressed generalisation, on mobile phones, of patterns of overlay-point data on base mapping (e.g. multiple urban locations added to Google map displays); another, from China, discussed user interaction with mobile map displays of varying extents and levels of detail, leading to variable navigation strategies and competences. Also recognised are more customised environments and the specific demands of 'on-demand' mapping.

EVALUATION

Long-standing topics of interest were also covered by the meeting.

For example, evaluation of generalised output was reported in research papers on comparative map legibility at differing scales. A notable project based at its Center of Excellence in Missouri, USA addressed assessment of the effectiveness of automated methods implemented for hydrographic network generalisation on USGS mapping. Such evaluation may involve comparison with existing products or response to new contexts, including benchmarking of systems developed by National Mapping Agencies, or commercial off-the-shelf generalisation systems. A wide-ranging survey by EuroSDR of generalisation systems was reported, along with specific projects in Canada, implementation of in-house generalisation tools by the Turkish General Command of Mapping, developments in ArcGIS software, and new environments for generalisation realised at IGN, Paris.

CONCEPTUAL APPROACHES

Fundamental conceptual approaches to generalisation have resulted in a mixture of operators and approaches. Graphical simplification algorithms were considered, enhanced by constraint-based techniques; simulated annealing was compared to a new 'Ant Colony' optimisation approach in a novel paper from Glamorgan

University. Attempting to dissect the process of 'design' in this way can also involve exploring deeper issues of a language of scale, and the semantics of map generalisation. The use of the Semantic Web to help create a Multiple Representation Database was demonstrated, along with a practical experiment to help define the meaning and location of some geospatial objects important to generalisation.

JUNE MEETING

The remaining sessions covered introductory overviews, including the role of generalisation in INSPIRE, and some specific data pre-processing methods. A further meeting of the Commission will take place immediately before the 2011 International Cartographic Conference, at IGN Paris in late June this year. More details on the Commission webpage at www.icaci.org.

MORE INFORMATION

1. <http://aci.ign.fr>
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Paris in July for Our Premier Event

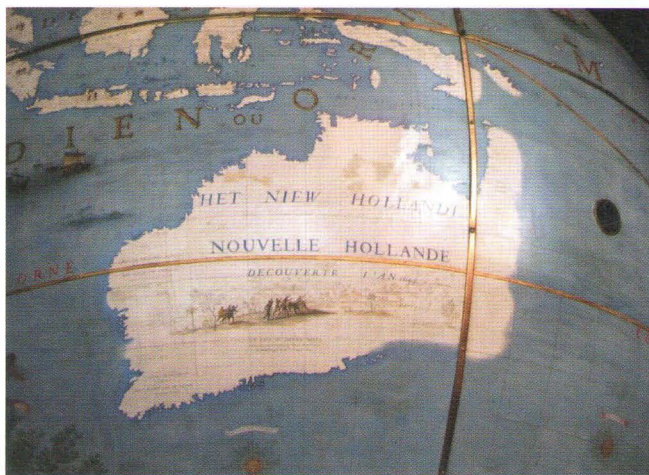
The 25th International Cartographic Conference and 15th General Assembly of the International Cartographic Association will take place in Paris during the first week of July. This is the premier quadrennial event of the association, and forms the major international meeting for cartographers and GI scientists in 2011. A technically interesting, socially exciting and academically advanced week is promised for those who travel to Paris. Full details are available on the conference website at www.icc2011.org.

ACADEMIC SCHEDULE

The major component of the conference is the academic schedule, themed to cover every aspect of cartography and geographic information. Over five hundred papers will be presented orally, along with more than three hundred posters. A full review process, undertaken by local scientific committee along with experts from ICA Commissions and Working Groups, has resulted in presentation of the best sixteen papers in special issues of the ICA-recognised journals, *The Cartographic Journal* and *Cartographica*. A further 65 top-rated papers will be presented in full in the first volume of a regular new series, *Advances in Cartography and GIScience*, to be published by Springer immediately prior to conference. This volume will function as something like a 'yearbook of cartography', presenting contemporary research sourced from premier international cartographers.

AFRICAN PRESENCE

Papers for the ICC have been submitted from around the world,



Close-up of Coronelli globe in the French National Library, venue for the ICC gala dinner.

with approximately 15% in French, one of the two official languages of ICA. The concentrated promotion of the conference in Africa, much of which is francophone, will mean that there should be a significant presence from that important region. In addition to the standard parallel themes there will be special meetings and events; a regular session with national and regional mapping organisations, which form an important cohort of ICA membership; a half-day tribute to the celebrated French cartographer and designer Jacques Bertin, demonstrating the vital part he has played in establishing contemporary cartographic theory and practice; a research students' speed-presentation session; and a range of interesting keynote speeches from leading personalities.

TRADE SHOW

The technical trade show will showcase the best and most innovative cartographic and GI data-handling equipment, software and applications. Further exhibitions will include the extensive

International Map Exhibition, which always inspires and delights cartographic visitors, and the biennial Barbara Petchenik Children's Map Exhibition. Technical tours will allow delegates to visit the French IGN in its stunning new headquarters in Vincennes, the French National Library, the Research Institute for Development and, for the adventurous, the French Naval Hydrographic and Oceanographic Service in distant Brest (Brittany).

The social programme includes the usual evening ice-breaker and gala dinner activities, along with more informal orienteering in the Bois de Boulogne and a dawn walk along the original Paris Meridian line, led by an IGN geodesist. Bienvenue à la conférence cartographique internationale 2011!

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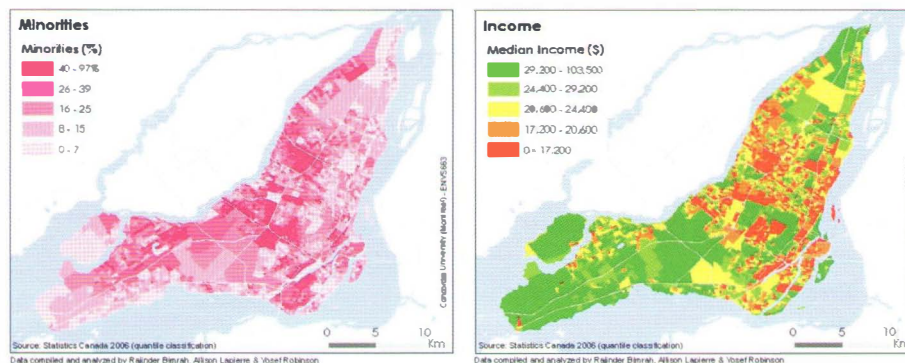
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Arts and Science Meet in Montreal



Mapped extracts from workshop database: socio-demographic structure of Montreal, based on percentage of visible minorities (left) and median income (right).

Last September the Art and Cartography Working Group of the International Cartographic Association (ICA) organised a workshop entitled 'Mapping' Environmental Issues in the City: Arts and Cartographic Cross Perspectives. This workshop aimed to encourage and explore the interactions between cartographers, artists, designers and any other area of 'arts' (poets, writers, dancers, gamers) who work on the various aspects of mapping.

EXPECTATIONS

Across different domains of knowledge and practice, mapping is a method that many use to make sense of information and communicate it to others. However, expectations and conventions around mapping differ tremendously. While in cartography 'mapping' refers to specific techniques and concepts for representing information relating to places, in the arts and humanities this term is used more broadly and includes a diversity of practices and expectations. More than simply data, artists and other creative practitioners express through maps differing understandings, fears, hopes, emotions and perceptions about locations and people, and

these dimensions are essential for a full understanding of our relationship to places in the world today.

ARTISTS AND MAPS

The goal of the Montreal workshop was to expose cartography to mapping from the arts, and vice versa. In order to reach this goal the workshop was designed to facilitate the production of diverse spatial representations of a specific database compiled during winter 2010 by students on the Diploma in Environmental Assessment (Department of Geography, Planning & Environment) at Concordia University (Montreal). The data collection and analysis was part of a course entitled 'Geographic Information Systems for Environmental Impact Assessment (ENVS663)' and the database includes information relating to health issues, socio-demographic profiles, air quality and industrial emissions in Montreal.

EXPLORATIONS

International scholars, students and artists were then invited to submit proposals describing projects somehow inspired by this database. During three days (8th to 10th September 2010) sixteen artists,

cartographers, designers, and media practitioners from across the globe (Canada, USA, Europe, Australia, New Zealand) developed their own projects and contributed to the development of others (see the list of projects: 1). After the workshop authors finalised their project into scientific and artistic contributions. The diverse disciplinary explorations that emerge from this workshop will be published by Springer-Verlag as an edited book, so that the discoveries of the participants will both be disseminated to the broader community of people engaged with issues around mapping and place representation, and also provoke further explorations across the field (find more details about the workshop at 2).

Sébastien Caquard, Concordia University, Montreal, Canada

MORE INFORMATION

www.icaci.org

1. <http://mappingworkshop.wordpress.com/program>

2. <http://mappingworkshop.wordpress.com>

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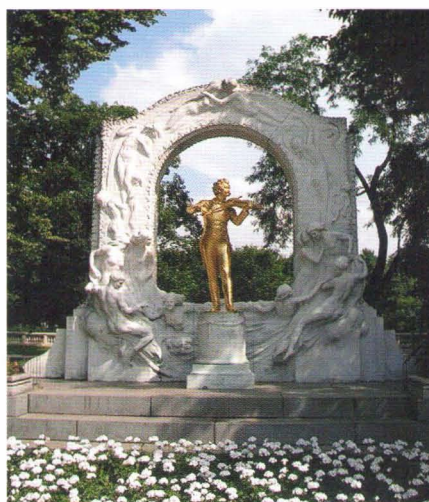
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Significance of Collaborative Cartography

It is well recognised that mapping has perhaps changed more profoundly in recent years than in any previous era. In the past map production was reserved for professional cartographers and dissemination was radial: users were amateurs who consumed professional products. The revolutions in digital cartography, initiated in the 1980s, did little to alter expert control over mapping, and GIS if anything exacerbated the power of the producer. Now, however, websites such as Google Earth offer everyone the chance to produce their own individual maps, in many cases without the need of any professional qualification. Never before has such democratisation been as widespread. So many users today are brought together via the internet that producers and consumers are no longer distinguishable.

AMBIVALENCE

These developments evoke ambivalent attitudes: some critical writers have argued they spell the end of traditional cartography. There is an increasing need for dynamic, and particularly interactive, maps, and web 2.0 offers a suitable platform for these new approaches to the acquisition, assembly and publication of geographic information. Others embrace a new era of map production with undreamed-of possibilities offered by the bi-directional collaboration that characterises the new mapping worlds of web 2.0. New terminologies are emerging to reflect this changing conceptual field: in contrast to the old cartography, there is now 'neogeography', embracing the integrative power of ubiquitous computing in which geography brings together the formerly separate. Yet others cast



Monument to Johann Strauss II in Stadtpark, Vienna.

these developments as volunteered geographic information (VGI), stressing the potential of locally sourced or volunteered information.

CONTROL

To date, most academic cartographic research has focused on controlling the syntactical dimension of communication and trying to provide better maps by exploring useful semantic aspects. However, the collaborative and participative nature of web mapping 2.0 will lead to a change in research priorities. It is the user's behaviour and interests that determine the communication process in web 2.0: semantics, and especially symbol and sign syntax, are usually beyond the control of collaborative users. The increasing significance of the user in contemporary mapping systems is reflected in some ICA commissions, such as that on Use and User Issues, and increasing research is being devoted to contextual studies. Cartography in the age of participative mapping will be challenged to define and offer rules, methods and techniques that can be applied to collaborative

data input. Topics such as cartographic generalisation, cartographic symbolisation and visualisation techniques will all be profoundly altered in the world of web 2.0.

ENDORSEMENT

The ICA aims not only to reflect these developments in its discussions and commission works, but also to endorse them by actively seeking to offer platforms. The community of the Open Street Map Initiative will meet in Vienna from 15th to 17th July 2011 for the State-of-the-Map Conference, and ICA is endorsing this event. The ICA is seeking even further to use up-to-date communication possibilities on the ICA website to offer therefore contemporary possibilities for more communities to share and contribute to the exciting world of cartography.

Georg Gartner, ICA vice-president

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AutoCarto 2010

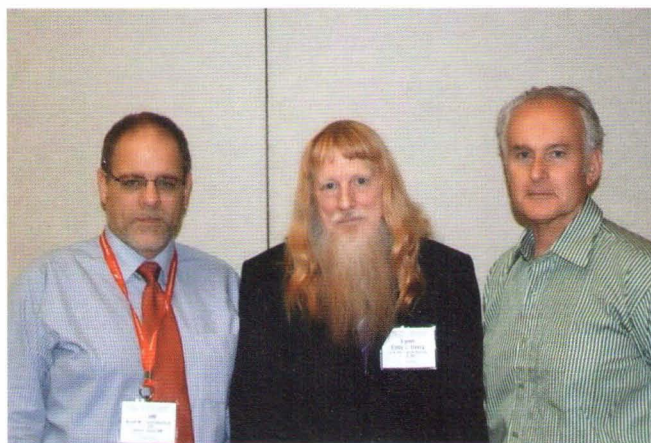
In November 2010, the Cartography and Geographic Information Society (CaGIS) sponsored AutoCarto 2010 in conjunction with the American Society for Photogrammetry and Remote Sensing (ASPRS). The focus of this joint meeting was Geospatial Data and Geovisualisation: Environment, Security, and Society. The same gathering hosted a number of commission meetings of the International Cartographic Association (ICA) and the International Society for Photogrammetry and Remote Sensing (ISPRS) Technical Commission IV: Geodatabases and Digital Mapping.

LEADERSHIP ROLE

This conference attracted 605 attendees from 39 countries and was a resounding international success, to which the ICA contributed significantly. According to Eric Anderson, executive director, CaGIS, "AutoCarto has always attracted international participation, but to have the ICA Executive Committee and a record number of ICA Commissions and Working Groups involved was tremendously encouraging. The co-location of CaGIS, ICA, ASPRS, and ISPRS creates an atmosphere of collaboration across the GeoSciences and demonstrates the ability of CaGIS to provide leadership to this community."

SPECTACULAR VENUE

A total of ten ICA Commissions and Working Groups took advantage of the spectacular venue of Orlando, Florida to host workshops, symposiums and meetings. The Working Group on Census Cartography organised a symposium entitled 'Cartographic Advances in Census Data Collection and



Scott Freundsuh, president, CaGIS; Lynn Usery, chair, US National Committee to ICA; Bill Cartwright, ICA president.

Dissemination'. The Commission on Management and Economics of Map Production held a workshop on the 'Management of Geographic Information and Map Production'. A meeting on 'Advances in Sensors and Algorithms for Topographic and Thematic Mapping' was co-sponsored by the Commission on Mapping from Satellite Imagery and the Commission on Geospatial Analysis and Modelling. The Commission on Maps and the Internet and the Working Group on Open Source Geospatial Technologies organised a meeting about 'Online Maps with APIs and Map Services'. And the Map Projection Commission and the Cartography for Early Warning and Crisis Management Working Group also held meetings.

EC BUSINESS MEETING

As United States ICA sponsor, the U.S. National Committee hosted a business meeting of the ICA Executive Committee during which it was updated on the forthcoming International Cartographic Conference scheduled to take place in Paris from 3rd to 8th July 2011. The

committee also continued work on revising the organisation's strategic plan, discussed recent improvements to the ICA website (www.icaci.org), began discussions on the initial plans for Dresden in 2013, and reconnected with friends and colleagues from around the globe.

Tim Trainor
ICA vice president, US Census Bureau, Washington, D.C.

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ICA Commission on Use and User Issues 2007-2011

The International Cartographic Conference in A Coruña, Spain (2005) discussed establishing a forum to work on 'use and user issues in cartography and geo-information processing and dissemination'. The meeting agreed that there was a great interest in such topics and it would be useful to share and develop knowledge in an ICA Working Group. The subject of study should not just be map use, but use and users of hardware, software and information systems, interfaces, geographic data and databases.

NEW COMMISSION

Working Group activities took place in Manchester, Moscow and Warsaw, and in Moscow in 2007 the group was transformed into a Commission with terms of reference including:

- maintaining a website for exchange of knowledge, news and information on use and user issues in cartography and geoinformation processing and dissemination
- maintaining an online bibliographical database
- maintaining a database of individuals working in this area
- producing a major publication (and fostering others) on use and user issues
- organising ICA conference sessions
- organising and participating in specialist workshops, including those in related fields such as computer science.

These activities have been led by commission chair Corné van Elzakker (Twente University, Netherlands), vice-chair David Forrest (Glasgow University, UK), vice-chair Eric Kramers (Natural Resources Canada), Annu-Maaria Nivala (Finnish Geodetic Institute),

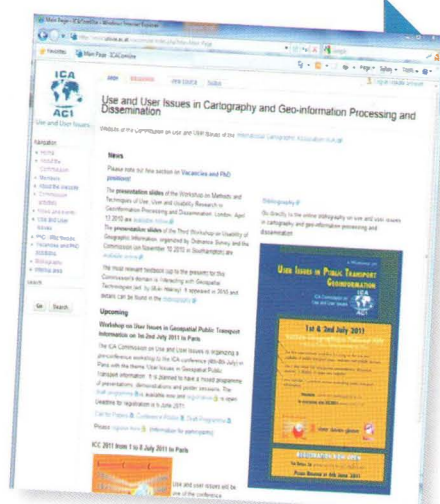
and vice-chair Alexander Pucher (University of Vienna, Austria). Invaluable help for the website and online bibliography has been provided by David Schobesberger (Austria), Ben Nausner (Austria) and Jessica Wardlaw (UK). The commission now has more than a hundred international members on the mailing list.

ENHANCED WEBSITE

The website (1) supplies information about forthcoming and past meetings, conferences, workshops and other Commission activities, with access to materials presented. A 'Vacancies and PhD positions' section has been added, as well as an online bibliography. Publications listed focus on use and user research, methods and techniques, usability, and improving user abilities for cartography and geoinformation experts. The Commission published a special issue of *The Cartographic Journal* (Vol.45, No.2), and forthcoming is a textbook publication, *Research Methods and Techniques for Dealing with Use and User Issues in Cartography and Geo-information Processing and Dissemination. Interacting with Geospatial Technologies*, edited by core member Muki Haklay, is an indirect consequence of Commission activities. Core members are also contributing to the planned Cookbook from the ICA Commission on National and Regional Atlases.

MULTIPLE MEETINGS

Eight business meetings have been held, in Moscow (2007), Vienna, Salzburg (2008), Dresden, Santiago (2009), London (2010) and twice in Paris (2011), and the Commission has been involved with ten scientific



Screenshot of Commission on Use and User Issues website.

workshops, seminars or conference sessions. Workshops took place in Nottingham (2009) and Southampton (2010) establishing contact with human-computer interaction, ergonomics and usability specialists. Good contacts have been maintained with other ICA Commissions and Working Groups. This commission focuses on research capacity building in a broad sense, including involvement of young PhD researchers, and is a good example of the application of the ICA Research Agenda to real issues in an exciting area of cartography.

Corné van Elzakker, University of Twente

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1. www.univie.ac.at/icacomuse
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A New Team to Map the Way

The 25th International Cartographic Conference (ICC) took place at the Palais de Congrès in Paris in early July this year, and was a successful meeting of mapping scientists, all committed to advancing the discipline of cartography in its broadest sense. Over 1500 attendees were able to listen to 483 oral presentations, view over 200 posters, participate in active meetings (e.g. the young scientists one-to-one speed presenting session; the national mapping organisations day; the commemoration session celebrating Jacques Bertin), and engage in social activities in venues ranging from the intimate Café Zango to the imposing Musée National de la Marine. Further events associated with the conference included more physical pursuits such as an Orienteering competition, and an early morning walk along the route of the Prime Meridian, finishing at the historic Paris Observatory. There were technical excursions to Institut Géographique National (IGN), Institut de recherche pour le développement (IRD), to the French Hydrographic Survey (SHOM, in Brest), and to the Bibliothèque Nationale de France.

Each ICA Commission held a meeting in the conference centre during the week to report on their work during the 2007-2011 period, and posters were produced to summarise their activities to all conference attendees. These posters are available to view on the ICA website, giving a good overview of contemporary research in our subject. Several Commissions held additional workshops and symposia immediately before the conference in venues around Paris, with enjoyable meetings organised by the



Past-president Bill Cartwright, new Commission on Maps & the Internet chair Rex Cammack, and new ICA secretary-general & treasurer László Zentai at the Orléans symposium.

groups studying History of Cartography, Digital Technologies for Cartographic Heritage, Generalisation & Multiple Representations, Management & Economics of Map Production, National & Regional Atlases, Theory of Cartography, Ubiquitous Cartography, Geovisualisation, Use & User Issues, and Open Data Access & Intellectual Property Rights. Joint meetings between the Maps & Society Commission and Art and Cartography group, and a large symposium in Orléans with the Commissions on Education & Training, Cartography & Children, and Maps & the Internet, also took place before ICC2011.

Exhibitions in the main conference venue were well received and, as usual, showed the wealth of cartographic expertise and effectiveness presented by groups from commercial companies and national mapping agencies to local government and children.

The administration of ICA was also addressed at the associated 15th General Assembly, where member nations voted on the direction of the association for the next four year period. A new president, Professor

Georg Gartner from the Technical University of Vienna, was elected, replacing Professor Bill Cartwright who has had a most successful presidency (2007-2011) and will serve as past-president. Secretary-general & treasurer 2007-2011, Dr David Fairbairn, has been replaced by Professor László Zentai from Eötvös University in Budapest, although David will continue responsibility for this column in GIM magazine. The new Executive Committee, with at least one member from each continent, reflecting ICA's international reach, is listed alongside, as is the full list of Commissions approved by the General Assembly for the 2011-2015 period.

ICA has renewed itself in 2011 with an excellent conference and a new leadership, committed to continuing and developing the work of those who have gone before.

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Effective by Design

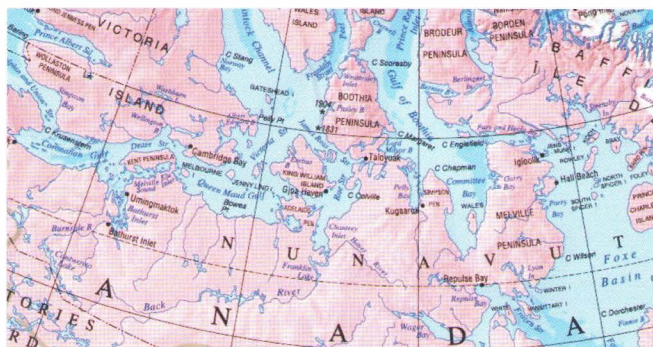
A fundamental role of cartography is the effective presentation of geospatial data, communicating relevant information in a manner which is clear to the map user. ICA is therefore committed to investigating the primacy of map design, its principles and optimisation, and a new Commission on Map Design was agreed at the ICA General Assembly in July of this year.

TACKLING CHALLENGES

The Commission will seek to engage international experts in cartographic design in all forms to provide a body of knowledge that guides cartography as it tackles the challenges brought about by GIS, the internet and cloud-based computing. Such changes bring with them new map-makers who have not been formally trained in cartography yet still require knowledge in the basic tenets of good cartographic design. Additionally, emerging production and display environments require new approaches to effectively implement well-understood design techniques alongside tackling the challenges and harnessing the opportunities brought about by new technologies.

SETTING PRIORITIES

The Map Design Commission will have parallel academic and applied strands aimed at developing theory as well as sharing best practices. A proposed agenda includes the following priorities: Priority One - Web map design, Temporal or animated map design, Interactive map design, 3D map design; Priority Two - Hybrid orthophoto image map design, Small format map design, Base map design and The relationship of base maps to special purpose mapping;



Good cartographic design should apply to every type of map (extract from award-winning North Circumpolar Map, Atlas of Canada).

and Priority Three - Black and white map design, The representation of terrain on maps, The representation of quantitative data on maps and the design of special purpose maps. Thus, cartographic design issues which cross-cut the focuses of the other Commissions will be addressed and the work of the Commission will be complementary to other ICA groups.

The specific aims of the Commission are to:

1. discuss, develop, illustrate and promote the principles of map design
2. identify examples of good cartographic practice which underpin high-quality, effective map design
3. provide appropriate mechanisms and support for the dissemination of current map design research
4. develop high-quality materials to support cartographers and map-makers in the development of their own maps
5. develop support for the design of specific cartographic products that are challenged by new modes of production
6. inform, enthuse and engage with fledgling map-makers (such as neo-cartographers) in a mutual exchange of methods, needs and ideas

7. maintain a website that includes a bibliographical database of map design research, a community identity for those who work in the area of map design, resources to assist map-makers in their design endeavours, and a forum for the exchange of ideas and expertise
8. work with other ICA Commissions which incorporate a design perspective
9. have fun designing maps and enthuse others to approach their own work with an eye on design.

STRUCTURE

The elected chair is Kenneth Field, who has successfully created many prize-winning cartographic designs, and vice chair is Aileen Buckley, who is primarily responsible for the welcome and increasing interest of a leading commercial software house (ESRI) in map design. Assisted by Bernhard Jenny, who comes from the 'Swiss school' of cartography that is renowned for its influence on contemporary map design, this group wishes to formalise and apply the best principles of map design.

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The Production of Mapping and the Mapping of Production

It must be recognised that in contemporary cartography, 99% of the maps which are conceived are 'temporary' productions, created by 'amateur' map-makers using geobrowsers or other software tools (including GIS) and displayed on screens ranging from mobile phones and satnav systems to military aircraft cockpits and emergency planning centres. Such maps disappear when the 'off' switch is pressed. Traditional map production systems involving hard-copy output and managed by professional organisations are still important, however, particularly in sectors such as national mapping, atlas production and tourist cartography.

The ICA Commission on the Management and Economics of Map Production has examined such activity in recent years. Its terms of reference for the 2007-2011 period covered (i) production management knowledge in economics, planning and organising, cost calculations, guidelines for production, quality assurance and quality control; (ii) surveys of software and hardware, including tools to help in management, scheduling, flow-charting and educational aspects; and (iii) addressing new working practices in areas such as web publishing, archiving and print-on-demand.

Summer schools took place in Urumqi, China, in 2007 and 2008 to address these issues. Also, workshops were organised in Gent, Belgium, in July 2009 and in Santiago, Chile, in November 2009. These looked at specific subjects such as (i) formal description of production flow charts; (ii) economic aspects such as value, price of geographical data and map



Philippe de Maeyer (Belgium), chair of Commission on Map Production and GeoBusiness.

products; and (iii) map production technology in less-favoured countries, and how technological help and transfer of management skills can be effective. A further workshop in Orlando, USA, in November 2010 looked at (i) dataware, the use of open data in different applications in GI and map production, also including aspects of crowdsourcing; (ii) standardisation, especially for the formal description of the cartographic production line; and (iii) the value chain of geographic information. An extensive user survey was organised during the February 2010 IMTA Conference and Trade Show in Bayonne, France. Lectures by Commission members on topics such as measuring map quality and map economics were well received.

The continuation of the Commission has been approved with a slightly different name: Map Production and GeoBusiness. Its new terms of reference for 2011-2015 include an appreciation of the importance of business models to those organisations which are involved in practical map production. The Commission is directed to:

- Enhance the study of map production and process management, map economics and geobusiness;
 - Research the impact of modern communication methods on map production, business models, change management and design thinking;
 - Research the impact of service-oriented architectures and future technologies on map production, publishing and archiving;
 - Encourage international collaboration on the study of map production and geobusiness with particular emphasis on bridging research, government and commercial sectors;
 - Participate and contribute to activities of other relevant ICA interest groups (e.g. Commission on Use and User Issues, National Mapping Organisations).
- Those interested in participating in such tasks are encouraged to contact the Commission chair (e-mail in the column to the left).

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Maintaining Intellectual Property and/or Widespread Open Access?

The quadrennial General Assembly of ICA votes on the establishment and dissolution of the ICA Commissions: those listed to the left were approved at the 2011 General Assembly in Paris. In addition, some of the research work of ICA is carried out in Working Groups, created by the ICA's Executive Committee to address contemporary areas of cartographic research which are not covered by any one Commission and which can be regarded as shorter-term issues.

One area of interest is the changing landscape of geospatial data collection, distribution, supply and use, notably in an era of significant development in public and open access to data and other geospatial tools. The Working Group on Open Data Access and Intellectual Property Rights (ODAIPR WG) was approved in 2008 under the direction of Lucia Lovison-Golob (Harvard University) with several topics of active investigation specified:

1. Identification of the main policy, legal frameworks and business models within which geospatial data and cartographic material are produced, accessed, and used.
2. Harmonisation of intellectual property rights for geospatial data for cartographers and other users across different domains (such as emergency management and mobile telephony), different countries and in different organisations and projects (such as INSPIRE, CODATA, GSDI and GEOSS).
3. Identification of tools and methods for evaluating the cost and benefits of open and



INSPIRE allows us to search for data, but will it also cost us?

sharable geospatial data for cartographers.

4. Identification of tools for the discovery, access, and use of geospatial data, and identification of different types of geospatial data management and the geospatial data standards that will make enable to different types of geospatial data such as scientific versus non-scientific data and public versus private data.
5. Capacity-building for developing good practices of geospatial data management according to performance, scalability and security criteria.

As part of this daunting agenda, the ODAIPR WG reached out to active members with a range of different experience and expertise, setting up a website and organising a valuable workshop earlier this year at the Bibliothèque National de France. The agenda covered the latest developments in policies, procedures and activities of organisations such as INSPIRE and initiatives such as GEOSS.

The prime activity was a valuable survey, undertaken in 2009, of a wide range of geoinformation professionals, Open Geospatial Consortium members, International

Cartographic Association members and map librarians worldwide. Both suppliers and users of geospatial data were questioned and the results showed a varied picture of access. Data producers still rely on copyright as the prime means of protecting their data (53%), whilst 32% use licensing (many using both copyright and licensing). 29% give open access to their data, and of interest is what the future holds for such a model.

In terms of users, the largest proportion accept some form of restrictive conditions (including direct payment), but many users are able to negotiate discounted prices, cost-recovery prices only or even some nominal fee only.

The survey results show the type of obstacles facing open access to data. There is an ongoing struggle between the access, reuse and exchange of geospatial data and the protection of intellectual property rights. As this group's work is of continuing interest to ICA, it seems likely that the topic of IPR and open data will receive more attention in the future.

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