



ICA News Nouvelles de l'ACI

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<http://www.icaci.org>

Editorial

Another successful meeting of the worldwide ICAcommunity is over. Compiling the information for this Newsletter provided with the opportunity to know that Ottawa was a success from a technical and social point of view. I would like to acknowledge Chris Board and Alberta Auringer Wood for sharing with the readers their own views about Ottawa. Ferjan Ormeling, Michael Wood and Jacqueline Anderson also thoroughly contributed with different pieces for this post-Ottawa issue. I would also like to thank Sjef van der Steen, Carolyn Weiss, Alberta Auringer and Fraser Taylor for the materials sent to portray 'Ottawa in pictures'.

It has been quite an interesting task producing this issue, the first under my responsibility. Fulfilling a long-term desire of Chairs of Commissions and delegates, I plan to put the digital version of the Newsletter in the World Wide Web very soon. I am investigating the best alternatives to have the same layout on the Web as the hardcopy, so that it can be easily downloaded. I intend to finalise this process by February 2000. However, my priority was to produce the hardcopy and ensure a prompt distribution to the ICAcommunity, reflecting the guidelines suggested by the Executive Committee.

Like my predecessor I acknowledge any new idea that can improve the communication flow and information exchange among members, as well as keen readers discovering mistakes and reporting them to the Editor. Constructive critics are welcome!

Lastly, I would like to encourage members of Commissions, National and Executive Committees and sister societies to continue sending contributions to this Newsletter. For instance, news related to activities being organised, outcomes of meetings, Cartographic Conferences organised by member countries (e.g. Australia, Brasil, etc.) are always appreciated and worth sharing with the rest of the community.

I wish all the ICAcommunity a merry Christmas and an enjoyable beginning to the new Millennium.

Graciela Metternicht

New Executive Commission

Dr Bengt Rystedt of Sweden and Professor Ferjan Ormeling (The Netherlands) were elected President and Secretary General-Treasurer, respectively. Nine individuals had been duly proposed as candidates for no more than seven vice presidents' positions on the Executive Committee. At the final session of the General Assembly, the following were elected: Kirsi Artimo (Finland); Assistant Prof. Dr. Milan Konecny (Czech Republic); Li Li (China); Professor Elri Liebenberg (South Africa); Robert McMaster (USA); Takashi Morita (Japan); Alberta Auringer Wood (Canada). Dr. Michael Wood remains on the Executive Committee as Past President.

Christopher Board

President's Address

Dr Bengt Rystedt, National Land Survey, SE-801 82 Gavle, Sweden. email: Bengt.Rystedt@hig.se

Secretary-General and Treasurer's Address

Prof. Ferjan Ormeling, Faculty of Geographical Sciences, Utrecht University, P.O.Box 80115, 3508 TC Utrecht, The Netherlands; email: f.ormeling@geog.uu.nl

Commissions 1999-2003

The 11th General Assembly has approved seventeen Commissions, whose terms of references are described in pages 10 to 12). Commissions' Chair names and electronic mail are as it follows:

1. Education and Training, Chair: Vladimir Tikunov (tikunov@geogr.msu.su)

2. Map Production, Chair: Sjef van der Steen (steen@itc.nl)
3. Cartography and Children. Chair: Jacqueline Anderson (JAHFH10@vax2.concordia.ca)
4. Gender and Cartography. Chair: Eva K.-Blum (ekblum@kgf.ar.wroc.pl)
5. History of Cartography. Chair: Christopher Board (c.board@lse.ac.uk)
6. Census Cartography. Chair: Tim Davis (davitim@statcan.ca)
7. Marine Cartography. Chair: Ron Furness (rfurness@ozemail.com.au)
8. Spatial Data Standards. Chair: Harold Moellering (geohal+@osu.edu)
9. Theoretical Cartography. Chair: Alexander Wolodtschenko (wolod@karst8.geo.tu-dresden.de)
10. Visualization and Virtual Environments. Chair: Alan MacEachren (alan@geog.psu.edu)
11. Maps and the Internet. Chair: Michael Peterson (Michael_Peterson@unomaha.edu)
12. Map Generalization. Chair: Robert Weibel (weibel@geogr.unizh.ch)
13. Mapping from Satellite Imagery. Chair: Serge Le Blanc (serge.le_blanc@netcourrier.com)
14. National and Regional Atlases. Chair: Timothy Trainor (ttrainor@census.gov)
15. Mountain Cartography. Chair: Lorenz Hurni (hurni@karto.ethz.ch)
16. Planetary Cartography. Chair: Kira Shingareva (Kira.Shingareva@caravan.ru)
17. Maps and Graphic for Blind and Visually-Impaired People. Chair: Andrew Tatham (A.Tatham@RGS.org)

Every ICAmember nation has the right to propose members or corresponding members to the ICA commissions. Proposals by the national ICArepresentatives can be sent via electronic mail directly to the commission chairs. Alternatively, proposals for membership can be forwarded to the ICA Secretariat, ie. Ferjan Ormeling. The commission chair will decide about applications/nominations.

Ferjan Ormeling, Graciela Metternicht

Impressions of ICC '99

Impressions of ICC '99

I suppose regular attendees have become used to the oddity of the two sessions of the General Assembly occurring before and after the conference proper. This may explain why there is rarely a full house of delegates at the first session of the General Assembly. Not that the opening ceremony on the following day was an anticlimax. Dave Carney the Conference Director made sure of that! We were welcomed by the minister and deputy minister responsible for mapping but also by local politicians and representatives of national societies concerned with geomatics and the ICA. The dignity of the first moments aided by the military bearing of flags and the national anthem, was artfully set off by aboriginal musicians and local folk singers in two intervals. Michael Wood's thanks were offered in full Highland address ably assisted by the skirl of military bagpipes. Immediately afterwards we crossed the canal-side drive to the old Union Station, now the Government Conference Center. Mounties held up the traffic while we processed there. This was to attend the opening of a private view of the map exhibitions, which opened to the general public on the following day. A very popular exhibition of 160 children's maps of the world entered for the Barbara Petchenik Memorial Competition attracted press attention. The Canadian Cartographic Association also organised a competition for college students with impressive results.

Some 500 papers, including posters, were presented at parallel sessions, providing a wide choice, where your badge was the passport to any room. Two plenary sessions were organised. One was a conventional review lecture on the history of cartography by David Woodward, the chief editor of the Chicago History of Cartography Project. The other, billed as a debate, was based on a paper presented by Mike Goodchild. David Rhind and John Pickles were due to speak, but the latter was unfortunately prevented from attending. Controversial views on all sides provoked a great deal of discussion from the floor.

Most participants were content to receive the "complimentary" CD-ROM of the Proceedings, the paper version costing another \$CAN120. One can understand that organisers can keep registration fees manageable, and ease the burden on their being air-lifted home, but I doubt whether many will ever consult the papers. I thought that discussions after papers were less well informed and more affected by the vagaries of presentation than at other conferences. Of

1100 pre-registered delegates to the Ottawa conference, only 64 had ordered paper copies of the Proceedings. But demand for paper copies has apparently provoked a reprint.

As usual the General Assembly was split into two sessions, largely to accommodate discussions and "horse-trading" during the week. At the first, sister societies, our guests, were represented by Chris Andreasen (FIG),

Laurence Fritz (ISPRS), Michel Huet, (IHO), Ron Abler (IGU), Klaus-Peter Schwartz (IAG), ICSU, Ivan Müller (IUSM), Peter Blekrode (IMTA). Under 40 countries answered the roll call and sixteen lost their voting rights for being three or more years in arrears. Four countries were asked to withdraw from ICABecause they had not responded to any communication in the previous four years. Three new members (Estonia, El Salvador and Ghana) and two new affiliates were elected. It was announced that the subscription unit for the next four years would stay at \$US250, (which was ratified at the final session when 45 members cast their votes).

Standing Commissions have been abolished and replaced by Commissions. Working Groups, are now exclusively bodies set up by the Executive Committee for specific tasks. Although this was not universally popular, it was approved by the final session of the General Assembly. Thirty-one countries submitted national reports, a disappointingly small proportion of all members. Some of these are in special numbers of journals, but another from the Netherlands was prepared in the form of a business card with a WWW address where one could read the report.

Surprises were sprung on the delegates by the conferring of medals and Honorary Fellowships. There were the customary speeches from outgoing and incoming Presidents. For chairpersons of Commissions and national delegates there were workshops organised by Judy Olson. These are appreciated as much for the chance to meet colleagues as for the exchange of information and views. The spotlight was shone on ICA Publications with both Roger Anson (Chairman of the Publications Committee) and myself being summoned to meet the Executive Committee. Web publication was very much to the fore and for more long-term publications there was a desire to provide for workshops held by Commissions being published in selected journals. It has been decided to develop a new publications strategy which will be achieved by re-engineering the present situation.

Ottawa's weather was warm and sunny most of the time, making the huge barbecue at the Air Museum a gigantic success. This showed the mettle of the organisers who apparently simply laid on transport, food and drink in such spectacular surroundings. The aeroplanes, old and new, were amazing too. The final banquet was across the river in Hull, at the Cultural Museum, which also houses a postal museum.

Christopher Board

International Cartographic Conference Ottawa 1999: Closing Ceremony

During the Closing Ceremony Dave Carney gave his final report on the conference noting that there were 1,540 registrants, including 85 students and 17 children, with representatives from 79 countries. There were 1,473 items in the international map exhibit and 50 in the Canadian Cartographic Association one. A count of visitors to the room with atlases from Tuesday through Friday tallied over 2,000, with nary an item going missing! There had been media coverage of the conference by CBC, CTV, CHRO, the Ottawa Citizen, and three radio stations in Ottawa. David had special thanks for his committee, especially Cliff Wood, Peter Keller and Lloyd Bowler. Immediate Past President Mike Wood noted that 550 people had gone on the technical tours. Erin Kuyvenhoven presented the information about the results of the Barbara Petchenik Children's Map Competition and Roger Wheate (University of Northern British Columbia) announced the winners of various Canadian Cartographic Association awards including the map competition. Tammy dePas of Sir Sandford Fleming College was the winner of the Norman Nicholson scholarship, while those presented with exception contribution awards were Michael Goodchild, Sir Sandford Fleming College and College of Geographic Sciences, and David Douglas (Ottawa).

It was a very full week, with many options each day in terms of sessions of oral presentations or posters, exhibits and meetings. This conference provided a unique opportunity for members of the Canadian cartographic community to converse with their Canadian colleagues as well as ones from 78 other countries around the world. Dave Carney and all those involved in preparations for it must be congratulated for an excellent job. Preparations will now begin for 2001 in Beijing and 2003 in Durban!

Alberta Auringer Wood

President's Opening Address

Mrs Deputy Minister, Mr Carney, Mr Deputy Mayor, distinguished representatives of the Government of Canada, Canadian Geomatics Societies, Commercial sponsors, distinguished national delegates and other ICA friends. We are also greatly honoured to have with us today as our guests, senior executive representatives from our sister or colleague societies, namely Professor Klaus-Peter Schwarz (past-president) International Association of Geodesy, Rear-Admiral Chris Andreasen (next Secretary-General) International Federation of Surveyors, Professor Ron Abler (Vice-president) International Geographical Union, Dr Michel Huet (representing the International Hydrographic Organisation), Mr Larry Fritz (President) and Professor John Trinder (Secretary-General) International Society of Photogrammetry and Remote Sensing, Professor Ivan Mueller (past-president) International Union of Surveys and Mapping, and Mr Peter Bleekrode (past-president, European Division of the International Map Trade Association, (and two colleagues Mr Norman Strasma, Executive Director and Mr Will Tefft, Board member.)

May I bid you all welcome to the 19th International Conference and 11th General Assembly of the International Cartographic Association. Isn't this just a splendid location and magnificent launch for the most important event in the calendar of our Society, and indeed the final Cartographic Conference and General Assembly of the millennium? A fine city, Ottawa, an outstanding venue, thoughtful and generous sponsors and organising Committee hosts (our good friends) who have given so much of their lives and energies over the last few years for our benefit.

The Theme of this event is 'Touch the past, visualise the future – Images du passé, vision d'avenir', the most appropriate expression for this point in time - and for this stage in the evolution of our subject, Cartography. Canada is also a most suitable location for such a themed event, displaying in its own history, ancient and modern, the spectrum of change in both cartographic products and the evolving methods by which these can be created and employed. Within the magnificent exhibitions on display this week we can observe some of the fine images of early mapping, but also, if we consider more recent times and, perhaps the more relevant past, this is the country which produced the Canada Geographic Information

System (the first real GIS) – a most significant product and concept in the modern history of our subject. This innovative facility was under development when, as a postgraduate student, I was just beginning to grasp the implications of modern digital technology for cartography. The developers of the Canada GIS were also visionaries. Faced with the challenges (for such a vast and largely unpopulated land) of creating a mapping system which could be responsive to changing future needs, they appreciated and visualised a future in which efficient storage, retrieval, manipulation and utilisation of spatial data, largely through mapping, would be essential.

Coming more up-to-date we can see even more significant innovations which will be part of this Visualised future. Involved, as I have been, in international discussions on the importance of moving towards GSDI (Global Spatial Data Structures) I was interested to read – in the latest conference issue of the journal, *Geomatica* - of the Canadian Governments announcement of the program called 'Geoconnections'. The key element in this is the Canadian Geospatial Data Infrastructure (CGDI), the national component of what will eventually grow into the framework of the Global structure. Returning briefly to Canada's influence on the wider world even the word 'Geomatics', adopted in Canada, has become one of the most popular terms, world-wide, to describe what is now an increasingly digital technology driven field.

It has been said that humankind has invented three great forms of communication: language, music and mapping, but by far the oldest is mapping. Technology has been the driving force behind many changes in Cartography. After possibly thousands of obscured years of mapping during which technological influence was low, we reached the middle of the current millennium. Then printing offered a stimulus for change, although the type of map to thrive during the next five centuries was essentially a flat paper copy. But maps were not always so. Many may have been drawn on rocks, in caves, on the sand as well as on cloth-like material. Nevertheless examples of the iconic flat, so-called conventional map were created in their millions and the definition of 'map' became fossilised. Only in the latter stages of this century, with the arrival of computers, have serious changes begun to appear in map products. They no longer need to be static and on paper. They are dynamic, virtual, enriched with multimedia and much more interactive than ever before. However, although modern maps can be described as graphic expressions

of essentially digital spatial data, it is the visualised product which is, and always has been, the essence of the 'invention' of mapping I mentioned before. And 'Cartography' describes the field in which these visible products, whether two-dimensional paper graphics, or virtual four-dimensional animated interactive holograms, accessed via the internet, are produced. So do not abandon the term. It works and it can never be replaced by general or more comprehensive terms such as GIS or even Geomatics. Accept that 'cartography', although a relatively new word, can be sufficiently flexible in definition to include all these new dimensions. And thus our subject can continue to advance, instead of being lost in a sea of terminological chaos.

This is not to deny the gradual convergence of operations and functionality in Geospatial Science, but I still believe in the power of new maps and the necessity for this subject field to continue. If this unique and very sophisticated graphic-visual science were to be abandoned then no matter how comprehensive and efficient the databases, how high the data quality, how effective the geospatial networks and infrastructures, local or global, the most significant facility for exploration, analysis and presentation would all but stagnate or would be left to what I might refer to as the just acceptable mediocrity of the default world.

But of course that will not happen! The existence of the ICA and all its enthusiastic and active members from right across the spectrum of commissions, will ensure it will not happen. They represent the best of World Cartography and I believe their leadership both here and when back at home base, will help maintain the cartography along with and integrated within all the other developments which are taking place in the field of applied spatial technologies. Considering the vital need to tackle world problems, the tools and facilities must be developed to best extent in all their aspects for maximum effect. After all if we truly are a global family, we must maintain the good family name!!

May I conclude by paying tribute once again to Dave Carney and his whole organising team. They, with the support of the Canadian Government, Canadian Geomatics folk, and the sponsors, have ensured that this almost magical event would take place. As far back as 1992 they not only visualised the future but had sufficient faith in their ability to make it happen. Now let us repay them for their efforts by enjoying this feast, the Ottawa Conference, which they have prepared so carefully for us all.

Michael Wood

Ottawa in pictures



Dr Bengt Rystedt giving his first speech as ICA President.



Dave Carney, Conference Director.



Closing ceremony of the ICA '99. Ceremonial transfer of ICA flag from Canada to China.



Official opening ceremony of the ICC '99 Conference with native dancers.



Commission on Map Production. Brinstorming session at a local terras.



Folding of the ICA '99 insignia.



*Three generations of ICA Presidents
Left to right: Fraser Taylor, Bengt Rydstedt, Michael Wood.*



The ICC '99 Conference venue.



Michael Wood conferring the ICA Honorary Fellowship to Tositomo Kanakubo.



Canadiana Night Barbecue at the National Aviation Museum.



2nd session of the 11th General Assembly.

Ottawa in pictures



ICA Executive Committee 1999-2003.

Front: Kirsi Artimo (Finland), Li Li (China), Elri Liebenberg (South Africa). Back: Robert McMaster (USA), Takashi Morita (Japan), Ferjan Ormeling (The Netherlands, Secretary General), Bengt Rystedt (Sweden, President), Alberta Auringer Wood (Canada), Milan Konecny (Czech Republic), Michael Wood (UK, Past President)



Michael Wood with travel award winners.

Left to right: A Mwanza (Zambia), P Ogao (Kenya), T Bandrova (Bulgaria), R Darvishzadeh (Iran), M Wood, M Nyrtsov (Russia), Y Zhao (China), R Platina (Argentina)



Opening ceremony for the commercial exhibition and 'icebreaker' reception at the Ottawa Congress Centre. Back: S Furmann, D Miller, C Brewer, M Monmonier. Kneeling: B Buttenfield, C Baruth.



Some of the Commission Chairs 1999-2003. Front: K Shingareva, C Board, J Anderson, H Schlichtmann, E K-Blum. Back: S LeBlanc, L Hurni, S van der Steen, R Furness, T Trainor



Workshop for Commission and Working Group Chairs



Official opening of the International Cartographic Exhibition in the Government Conference Centre. Exhibit ribbon cutting by Michael Wood and Ian Wilson.

News from the Executive Committee

Paper Session for Travel Awardees

The Executive Committee reports that the following papers were delivered at the Ottawa Conference by those who received Travel Awards.

- Temenoujka Bandrova (Bulgaria), 3D cartographic modelling in city environment;
- Roshanak Darvishzadeh (Iran), Semi-automatic change detection for updating large scale spatial databases;
- Alick Mwanza (Zambia), Remapping Zambia for census, elections and other needs;
- Maxim Nyrtsov (Russia), Mathematical planetary cartography basis for non-spherical celestial bodies;
- Patrick Ogao (Kenya), Visualisation of urban growth using temporal cartographic animations;
- Dragan Stojanovic (Yugoslavia), Cartographic visualisation and animation of the dynamic geographic processes and phenomena;
- Dr Yongping Zhao (China), Metadata standard architecture based on digital earth; and
- Romina Plastina (Argentina), Changes analysis of land uses in an area of Buenos Aires, Argentina.

ICA Awards announced at ICC'99

Several ICA Awards were presented during the General Assembly in Ottawa with the following citations:

Roger Anson served fifteen years as chairman of the ICA Publications Committee. He established a publication program and systematized the processes for the acceptance of manuscripts for ICA publications. He tirelessly sought authors and guided them through the process. Anson coordinated the ICANewsletter with Bernard Gutsell for ten years. He has been a very active member of the Commission on Education and Training and has served as co-editor of the Basic Cartography series. In recognition of his many outstanding contributions to the ICA through his organizational work in the Publications Committee and commission work, Roger Anson is awarded the ICA Honorary Fellowship.

Dr. Christopher Board stepped in upon the death of Dr. Lech Ratajski and guided the Commission of Cartographic Communication for seven years. He edited the ICANewsletter

during the past four years. In addition, he was one of the principal organizers of the ICA Conference in Bournemouth in 1991. In recognition of his many outstanding contributions to the ICA through his publications, commission and conference work, Christopher Board is awarded the ICA Honorary Fellowship.

Tositomo Kanakubo has served the ICA for eight years as a Vice President. He initiated a working group on Theoretical Fields and Definitions in Cartography. In 1995 this working group gained commission status within the ICA. He published a book entitled 'Main Theoretical Issues Facing Cartography' in 1993. Tositomo Kanakubo also represented the ICA at UN Regional Cartographic Conferences for Asia and the Pacific. For his many outstanding contributions to cartography through his Executive Committee service and his work as a Commission Chair, and for his international service to ICA, Tositomo Kanakubo is awarded the ICA Honorary Fellowship.

Jaume Miranda has served the ICA as a Vice President for eight years. His background in computer science, remote sensing and photogrammetry has been helpful to the Executive Committee on many occasions. He is well known as the Director of the highly successful 10th General Assembly and 17th International Conference of the ICA in Barcelona. Jaume Miranda's interest in cartography and his superb leadership has gained world recognition for Catalan Cartography. For his contribution to Cartography and his outstanding conference and institutional leadership, Jaume Miranda is awarded the ICA Honorary Fellowship.

Fraser D.R. Taylor : Retiring from a four-year term as Immediate Past President, Fraser Taylor also served as ICA President for eight years and as Vice President from 1984-87. He was the first President of the International Union for Surveys and Mapping, IUSM. His interest and activities in international cartography led to an increase in ICA membership. He fostered relationships between ICA and the Pan American Institute of Geography and History, PAIGH, that increased interest in the work of ICA in Latin American countries. For his many, significant contributions to ICA, especially as President, Fraser Taylor is awarded the ICA Honorary Fellowship.

Jean-Philippe Grelot has most recently served as ICA Secretary-General and Treasurer for the past eight years and previously served as ICA Vice President from 1987-1991. He served on the Education and

Training and Population Commissions and has presented several papers at ICA conferences. He prepared for publication the volumes 'ICA Organization and Activities, 1991-1995' and its 1995-1999 update both in paper and floppy form. In recognition of his many outstanding contributions to the ICA through his organizational work as Secretary General and Treasurer and his commission work, Jean-Philippe Grelot is awarded the ICA Honorary Fellowship.

Jacques Bertin : The work 'Semiologie Graphique' published in 1967 by Professor Jacques Bertin has touched more than a generation of cartographers. Training in map design throughout the world discusses Jacques Bertin's ideas. The book has been translated into several languages, and Jacques Bertin's ideas are present in all introductory cartography books today. The ICA is proud to recognize Professor Jacques Bertin for his outstanding contribution to the field of cartography by awarding him its highest honor, the Carl Mannerfelt Gold Medal.

Ferjan Ormeling

Winners of the Barbara Petchenik Children's Map Competition, 1999

This year, the committee received 87 maps from 19 countries, including: Argentina, Australia, Bulgaria, Canada, China, Croatia, the Czech Republic, Germany, Greece, Guinea, Hungary, Indonesia, Japan, Norway, Poland, Sweden, South Africa, the United Kingdom and the United States. Thanks to all of you.

I believe it is important to note that the exceptional maps we have seen on display represent only a small fraction of those submitted to each national committee. We were limited in the number of winners we could select, however, the committee believes that every child who participated in this competition is a winner. This year, the committee selected 8 finalists, with at least one finalist in each of three age groups: under 9, 9-12 and over 12. Furthermore, at least one award goes to a child from each of four continent groupings, those being the Americas, Africa, Asia and Australia, and Europe. No more than one award is given to any particular country and each award is of equal merit.

Petchenik Winners

In the under 9 age category, the winner is: Nikola Zlatanov (7 years), Bulgaria, *'The map of the world'*. In the 9 - 12 age group, the winners are: Emmanouil Kopanezos (11 years), Greece, *'The olympic spirit unites people'*, József Bodor (11 years), Hungary, *'Flower-World'*, and Kamila Sojka (12 years), Poland, *'Wild animals -Inhabitants of lands and seas'*. In the over 12 age group, the winners are: Natalia Vadillo (15 years), Argentina, *'Materialism is not good for us'*, Barry Thierno Hamidou (14 years), Guinea, *'Torch of liberty'*, Mika Hayashi Nagisa Kawasaki, (14 years) Japan, *'Let bloom flowers over the world'*, and Elizabeth Böhmer (15 years), Sweden, *'It's a hard world!'*

Erin Kuyvenhoven. Images kindly scanned by Ms. Heather MacAdam



Japan



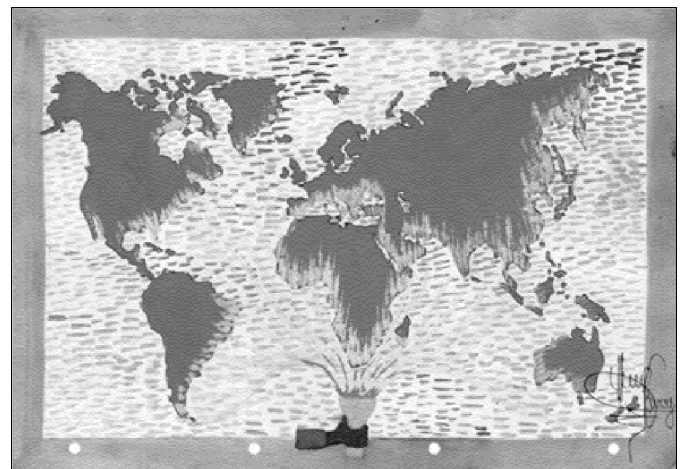
Poland



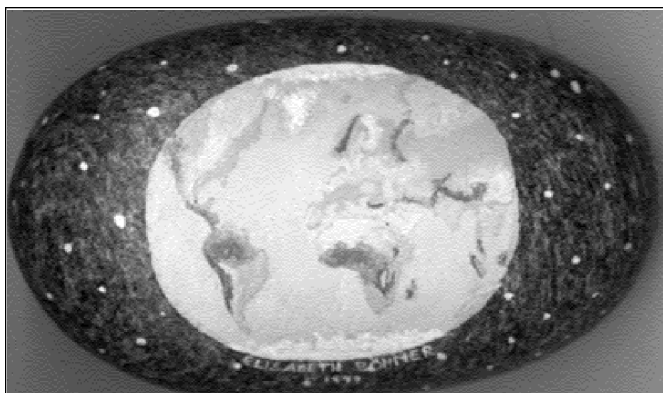
Hungary



Bulgaria



Guinea



Sweden



Greece

President's Report

President's Report to the General Assembly

This presidential report must identify the key elements of recent activities and accomplishments but my instinct is to focus on my special respect for the people in our Association, their activities and accomplishments. We acknowledge their recent work with gratitude, but we also appreciate that their rich and pioneering work is also building a structure for a new and exciting future for Cartography.

I start with the Executive Committee, my closest allies. Jean-Philippe Grelot, Secretary-General and Treasurer, has provided the firm administrative foundation on which ICA has continued to thrive. His task is enormous, but has been carried out with consistent effectiveness and reliability. His persistence in seeking contacts with overseas members and groups as well as in following up the payments of ICA fees is almost legendary. Thanks must also go to IGN, France, and to the Comité Français, for their production, in 1996, of the latest version of 'The ICA Organisation and Activities' – the only official booklet of the Society.

The Vice-Presidents share the great responsibility carried by the Executive Committee. Their activities have ranged from local to global. They have travelled far and participated in hundreds of hours of preparation, face-to-face discussion, debate and decision-making at 6 multi-day Executive Committee Meetings. They also have important liaison duties with Commissions and Working Groups. While they may prefer relative anonymity I wish to highlight some of their recent good works. Judy Olson, a strong contributor to Committee debate, has also established and run, in characteristically firm, effective and entertaining manner, the important workshops for chairs of Commissions, Working Groups, and National Committee Leaders. She also took on responsibility for the ICA Web page in 1998 and raised its content, value and profile. Regina Araujo de Almeida has been our only representative from South America and has acted as a most effective monitor of cartographic activities there, as well as sharing responsibility in Judy's ICA workshops. Tositomo Kanakubo has been both Vice-president and chair of the Commission on Theoretical Fields and Definitions with great effect. In the former role he organised ICA meetings in Japan and helped publish their proceedings. He has also represented ICA on the Global Map Steering Committee, and at the UN Regional Cartographic Conference for Asia and the Pacific in 1998. Milan Konecny has travelled widely and represented ICA in many conferences and meetings relating to

cartography and GIS. He also organised two ICA-supported Conferences in Brno in 1996 and 1999. Following the immense work of organising the Barcelona Conference in 1995, Jaume Miranda has continued his valuable contributions to the work of ICA, including the printing of the Canadian UNICEF Wallsheet, with its award winning Barbara Petchenik Competition maps, and supporting the Secretary-General in his review of the Spanish site proposed for the 2003 Conference and General Assembly. Thanks also go to Bengt Rysted, who has taken on many responsible tasks including ICA liaison with the International Standards Organisation (ISO), helping administer the ICA Travel Award, supporting the President during his review visit of the South African facilities for their bid for the 2003 Conference/General Assembly, and, of course, being the Director of one of the most successful International Cartographic Conferences, in Stockholm, in 1997. Finally I have a special debt of gratitude to Immediate Past President, Fraser Taylor. He has participated fully during his period of office, directly through his continuing maintenance and development of the Barbara Petchenik Competition archive in Carleton University, and indirectly through his own international cartographic work in Latin America and China. He has also been a most valuable member of the Executive Committee during the past four years.

Commissions and Working Groups

The Standing Commission on Education and Training has been supremely active in co-ordinating joint meetings around the world. Its list of achievements is long and I, personally, as well as ICA, owe much to Ferjan Ormeling and his team. The Standing Commission on Map Production, led by Sjeff van der Steen, also has a fine record over recent years, having held or been part of 5 excellent meetings from Chile to Norway and Indonesia.

The achievements of Harold Moellering's Commission on Standards for the Transfer of Spatial Data are also quite outstanding within their vital technical area. As a Category A Liaison to ISO/TC211 it has played a major role at this international level as well as publishing key texts in their subject area. The Commission on Theoretical Fields and Definitions, chaired by Tositomo Kanakubo, has an admirable record of completed tasks. From the 'Map Summit, Gifu, '96' to the successful publication of the text 'Map Semiotics around the World' we see the uniquely international application of scientific research and review of this ICA team. Cartography is always developing, and the

Commission on Visualisation exemplifies the pioneering edge of this exploration. The unique collaboration which Alan MacEachren and Menno-Jan Kraak have forged with ACM SIGGRAPH, continues to generate the most exciting concepts and products. Jim Carter and The Commission on Map Use have also been very active since 1995. Seminars, workshops, experimental work and participation in the Conference on Mass Media Maps exemplify this full programme. The Commission on National and Regional Atlases, chaired by Tim Trainor and Eva Siekierska, have continued their active campaigns.

My experience of their Seminar in Iceland in 1998 confirmed these views and that they too are probing new frontiers in access to geographic information through CD and the Web. The Commission on Maps and Graphics for Blind and Visually-impaired People, chaired by Andrew Tatham, has also had a busy period. Activities range from workshops in Tanzania and Slovenia to an electronic newsletter and the preparation of a tactile symbol encyclopedia for their Website. The main achievement of Ron Furness's Commission on Marine Cartography has been through co-operation with IGU in their CoastGIS series, and their focus on coastal zone management must be seen as of vital relevance in the Global view.

The new Commission on Gender and Cartography, led by Eva Siekierska, has been focusing on UN policies, links with IGU, FIG and PAIGH, joint ventures and continuing development of their Website, training materials and the special Directory of Women in Cartography, Surveying and GIS. The other new Working Group on Cartography and Children, chaired by Jackie Anderson, has also achieved much in its first session. This vital area for increased research and understanding has been developed through 4 key seminars, as well as international surveys on elementary instruction and support of the Barbara Petchenik World Map Competition.

Map Generalisation is still one of the greatest challenges for the 'new cartography' and Rob Weibel's Working Group has struggled tirelessly to meet it. Its world-wide forum, workshops and impressive publications give confidence for the future achievement of their longer-term aims. Although the accomplishments of the Working Group on Planetary Cartography are excellent in themselves (including multilingual planetary maps and a multilingual glossary), co-chairs Kira Shingereva and Jim Zimbelman, must also be congratulated for their expanding contacts with over 11 other international organisations with common interests. Tim Davis' new Working Group on Census Cartography has

also made a fine start to its work and, even shortly after Stockholm, I was able to channel their expert knowledge to help another ICA member nation facing serious map-related census problems.

These are but a few words of acknowledgement of work done, but I am also compiling a new edition of the Achievements of the ICA, which will appear after the Ottawa Meeting, and will include details of new Commissions and their contact co-ordinates as well as fuller reports from 1995-99.

ICAPublications in the past have been important for education, publicity and prestige in the ICA. They have also, traditionally provided almost US\$5 000 per annum to the Association. 1995-99 however has been a leaner period, only two books having appeared (*Elements of Spatial Data Quality* – ed. S. Gupta; *Spatial Data Transfer Standards-2* – ed. H. Moellering) but important plans are certainly in place for future publication ventures. We have now moved into a period of rapid change and, in response to current problems the Executive Committee has instigated a re-engineering review of publications, which will be quite fundamental. Roger Anson's immense contribution to publications over the past 18 years is fully acknowledged and his experience will continue to be called on in any future scheme. The other key publication is ICA News. In its attractive new form and under its new editor from 1995, Chris Board, it has increased as a reporting medium for ICA and has already appeared as a simultaneous publication on the ICA website. I am immensely grateful to Chris for his dedicated work since 1995, and we offer good wishes to the new editor, Graciela Metternicht, as she takes up the task for the next four years.

Special Thoughts

I have reported many achievements this morning, but the ICA also provides special awards to those with outstanding service to the ICA and to Cartography. Honorary Fellowships in 1995 went to Rudolfo Nunez de las Cuevas (Spain), Arpad Papp-Vary (Hungary), Don Pearce (Australia), Ernst Spiess (Switzerland) and Joseph Wiedel (USA); in 1997, to Richard Dahlberg (posthumously), Olof Hedbom, Christer Palm and Miroslav Miksovsky. We are grateful to Joel Morrison and his Awards Committee for their important work during this term.

Sadly there have been losses to the Cartographic community, notably Bogodar Winid, Dick Dahlberg, George Jenks, John Sherman (all in 1996), Rolf Bohme, John P.

Snyder (1997), Gylfi Mar Gubergsson (1998) and Stig Jaatinen (1999). It is hard to come to terms with such losses but we should rejoice in their lives and their special contributions to our subject.

Membership and Finances

There has been a small increase in member nations and affiliates and with some new possibilities in the near future. Finances are still strong despite the static unit fee rate of US\$250 since 1987.

Outreach

Co-operation continues with international bodies such as IAG, ISPRS, IHO, FIG, IGU and ISO, and the Special session on Tuesday afternoon will give delegates a chance to learn more about these organisations and how we might work together. Successful collaborations include the ICA session on Electronic Atlases at the IGU Conference in the Hague (1996) and plans are in hand to have a similar session with ISPRS in Amsterdam 2000. Although our links with the UN remained good until last year, Cartography lost status there early in 1998, with the original structure for the UN Regional Cartographic Conferences also being lost. Following a special meeting, hosted by Dr Carlos Jarque of INEGI, Mexico, in March 1998, I and three others from Europe, Australia and South America have been working to re-establish cartography/geospatial science at UN level. Progress is being made, but slowly and will be reported in ICA News. I have also been actively involved in the GSDI initiative, and retain a watching brief at GSDI meetings.

Links with ICSU, UNESCO and PAIGH, remain firm, and we have just opened dialogue with IMTA with a view to collaboration with some commissions. I was invited to submit a paper on the ICA to the most recent ICSU Newsletter, and focused it on ICA and Agenda 21. A final point relates to IUSM. This umbrella organisation, which has been in existence for some years, has been in difficulties. A meeting, chaired by President Ivan Mueller, took place yesterday afternoon during which it was decided to disband the organisation. However, to preserve the principle of cooperation, a new joint board has been identified which will allow member organisations to continue to meet on an annual basis, on rotation around the Member Organisations.

The participation by members of ICA in outside conferences increases and, with the increasing status of ICA, more conferences are requesting endorsement from our Association.

The Barbara Petchenik World Map Competition continues successfully with a fine display in Stockholm, 1997. Archives are still maintained in Carleton University, Ottawa, with Web-page access to the images and it is hoped that the potential of this archive will continue to be recognised.

Other important outreach activities shared by ICA have included the international conferences for SE Europe, held in Greece under the guiding influence of Prof Livieratos, and also the InterCarto series, organised through Vladimir Tikunov which have focused on the power of cartography and GIS for sustainable development. I am also glad to report that new cartographic Societies continue to be founded, as in Indonesia, (1997)

Some final thoughts

Attempting to fulfil my promises at Barcelona, my own travel and participation in ICA activities around the World have been maintained at as high a level as possible within my own work timetable. This involved travelling overseas on average about once every six weeks over the last four years. I have visited 22 countries on ICA business, and some of these on several occasions, and been in touch with hundreds of new members of ICA at local level, many of whom do not or cannot travel to international meetings. The ICA is a Global Family and I felt the need to take that message, personally, as far into the national network as possible.

The past 4 years have been a period of rapid change in most regions of the world, developing, transitional and developed. New technology grows in its presence and influence although there are many places where conventional methods and technology still apply. However, despite the influence of the technology, I like to think that cartography (a word that completely satisfies me, even in these turbulent times) keeps changing as it has been doing for thousands of years. In the past – in paper form – its power to do more than represent was severely restricted. Today however, cartography in all its dimensions, including temporal, and assisted by technologies such as GIS, has become a real power for data exploration, analysis and discovery. It is this potential which has always excited us within ICA and will continue to hold us together as we build for a better future. The world, with all its problems, physical and social, needs Cartography, and I have been proud to play a small part in this international endeavour as President of ICA.

Michael Wood

ICA Commissions 1999-2003

Terms of Reference for Commissions 1999-2003

The list of terms of reference has been shortened, as commissions shall organise meetings, serve as a focal point for their area of interest, cooperate with related organisations and transfer information to the world cartographic community at large by, for instance, maintaining home pages on the World Wide Web.

Commission on Education and Training

1. To produce an ICA-sponsored Internet *cartography teaching program*, with regional workshops for training the teachers.
2. To produce an ICA-sponsored Internet program for *continuing education*, with regional workshops for teacher training.

Commission on Map Production

1. Extend Production Management knowledge in economics, planning and organising, cost calculations, guidelines for production, quality assurance and control.
2. Complete publications : *Compendium of Cartographic Techniques, Flow Charting - Tools for Managing and Education, Surveys of software and hardware.*
3. Investigate (new) channels for publication with emphasis on technical, managerial and financial aspects. This includes also map publishing. Amongst all matters like Printing-on-demand- Webpublishing and Archiving should be researched.

Commission on the History of Cartography

To promote the study of the development of cartographic traditions with a view to understanding the extent to which they vary from country to country by :

1. examining the origins, development and output of national mapping organisations, concentrating on topographic coverage ;
2. compiling an annotated bibliography of published and/or accessible works on these organisations for each country ;
3. holding a series of meetings and workshops prepared with e-mail and conventional contacts, involving a small number of active researchers mostly identified from Who's Who in the History of Cartography, 9th edition, extending to involve other member nations of ICA and other countries ;

4. investigating ways of using new information technologies appropriate for the history of cartography.

Commission on Spatial Data Standards

1. To publish a book on national and international spatial metadata standards. The assessment characteristics and pilot assessments have already been completed.
2. To develop and publish a cross tabulated table of selected spatial metadata characteristics by each national and international standard.
3. To plan a new task on the Spatial Data Infrastructure (SDI) working in the areas of science, technology and standards at the Global, Regional and National levels, and to participate at the scientific level in several organisations active in that area. This work will be closely coordinated with the ICA Executive Committee.
4. To continue to serve as a Category A Scientific Liaison with ISO/TC211 Committee on Geographic Information/Geomatics.
5. To exchange information and reports by the ICA member countries and relevant bodies concerning the development of standards for the transfer of digital spatial data, metadata and the SDI.
6. To collect and distribute in the commission copies of all spatial data standards published in ICA countries and by relevant international bodies.

Commission on Theoretical Cartography

1. To study selected topics of theoretical interest (such as mapping as a cognitive process, cartographic semiotics and map language).
2. To compare and contrast theoretical structures in cartography.
3. To conduct workshops or symposia about selected aspects of theoretical cartography.
4. To compile and publish a report and collected papers about the work of the commission.

Commission on Visualization and Virtual Environments

1. To study and report on the changing and expanding role of maps in science, decision-making, policy formulation, and society in general due to the continuing technological and conceptual advances that enable new map forms used as *visual thinking/decision-support* tools. During this term, particular attention will be

directed to: (1) changes in the form and object of cartographic representation for visualization (due to developments associated with distributed visualization tools, virtual environments, intelligent agents, and others), (2) integration of cartographic visualization methods with both geographic information systems and geocomputational methods; (3) design and testing of new interface forms that take advantage of and support the changing nature of representation (associated with virtual reality technology, interactive map animation, and others) and of the potential for Internet-based collaborative visualization, and (4) cognitive issues that underlie design and use of map-based visualization tools.

2. To investigate and report on the links between *scientific visualization-computer graphics-virtual reality* and *cartographic visualization* and continue to facilitate exchange of ideas between cartographers and others working on problems in visualization and virtual environment design.

Commission on Maps and the Internet

1. Focus attention on disseminating maps and spatial data through distributed electronic networks.
2. Examine Internet map usage and project future areas of growth.
3. Examine web map user issues to better serve user needs.
4. Promote the exchange of information about effective Internet mapping for an international audience.
5. Collaboration / coordination with the ICA commission on visualization and virtual environments.
6. Improve user access to maps by examining the potential of Internet map metadata.
7. Promote instruction on Internet mapping through collaboration / coordination with other ICA commissions (education and training; cartography and children; national and regional atlases).

Commission on Map Generalization

1. To foster research and practical experience in multi-scale issues and automated map generalization and to form a network and focal point for researchers and practitioners in this domain.
2. To foster and maintain a liaison with related commissions and working groups

- within the ICAAs well as in related national and international organisations
- To maintain a World Wide Web site for electronic dissemination of research on multi-scale issues and map generalization, including:
 - a bibliographic database
 - examples of research projects and test data
 - links to related web sites
 - and (optionally) an electronic discussion list

Commission on Mapping from Satellite Imagery

- To analyse various types of satellite imagery in view of their potential inputs for producing and updating topographic maps and databases. Establish working groups for studying these inputs :
 - the working group on mapping sensors will list spatial systems which may provide data and will study their cartographic capabilities
 - the working group on imagery processing will list data cartographic processing systems
 - the working group on cartographic updating will try to define, for various mapping scales, the best compromise of scale, resolution and costs.
- To publish and present results and recommendations to the 2003 General Assembly.

Commission on National and Regional Atlases

- Promote and support the design, production and use of atlases and atlas information systems by:
 - demonstrating design and production applications of national and regional atlases
 - documenting guidelines and procedures for the design and production of global, national, and regional atlases via the Internet and, where applicable, printed proceedings
- Explore and develop new tools for atlas design, creation and dissemination by:
 - encouraging exploration and implementation of new atlas design concepts
 - recognizing static, interactive, and multimedia approaches for accessing geographic information
 - evaluating the use of the Internet, CD-ROMs, and other formats for dissemination of integrated geographic data

- Encourage efforts for integrating data for the development of electronic atlases and national and regional atlas information systems by:
 - evaluating metadata standards as they apply to atlas design, creation and dissemination
 - acknowledging requirements for diverse geographic and temporal data themes
 - identifying and exploring various alternatives to data integration issues
- Promote educational access to electronic atlases.

Commission on Census Cartography

The commission would :

- examine the role/contribution of census cartography programs in the national spatial data infrastructure in various countries and regions.
- study the cartographic concepts, standards, technologies and techniques which are used in the various member countries.
- identify opportunities resulting from the emergence of new technologies and methods.
- propose means by which greater harmonization of concepts and practices could occur, in order to facilitate the integration of data for regional and global analysis.

Commission on Marine Cartography

- Promotion of marine cartography
- Promotion of ICA and cartography as major contributors in the field of coastal zone management
 - Continue to conduct, in conjunction with the IGU Commission on Coastal Systems, the CoastGIS series of symposia (CoastGIS '99 is scheduled in September 1999 for Brest in France, and CoastGIS '01 in Canada in 2001)
 - Explore opportunities for training and workshops in GIS applications to the Coastal Zone within developing nations.
- Encouragement of publications in the areas of marine cartography and, in particular, publications dealing with the coastal zone
- Ongoing Cooperative Activities
 - Support initiatives aiming to promote training of nautical cartographers.
 - Provide input on special features, objects and attributes relating to the coastal zone to IHO.

- Provide any proposed change to IHO Publication S-23 (Limits of Oceans and Seas) and to the Undersea feature names gazeteers (following the guidelines stated in IHO Publication B6).

Commission on Mountain Cartography

Main objectives : to define the scope of subjects of high mountain cartography, to promote mountain cartography and to provide a platform to promote the exchange of ideas and scientific collaboration between scientists in high mountain cartography and related fields, by :

- Internal and external communication
 - E-mail, web site, organisation of joint workshops on specific thematic subjects in mountain cartography.
 - Collaboration with other ICA and national commissions.
- Survey and indexing of topics within mountain cartography and its related fields.
 - Compilation of web-based compendium.
 - Collection of mountain cartography specific and related links.
 - Collection of bibliographic references.
 - Status of national mountain cartography activities (federal agencies, private companies, etc.).
- Promotion of joint research projects with other other organisations and ICA commissions.

Commission on Planetary Cartography

- Promotion of all aspects of planetary cartography in an international setting. In this effort, we identify three distinct but mutually supportive uses for planetary cartographic materials: cartographic products used for scientific research, materials intended for use in education, and materials for public outreach.
- Documentation and analysis of the present status of planetary cartography within the international community.
- Evaluation of possible methods to enhance harmonization of planetary cartographic activities around the world. During the last term, we progressed on the development of a map of Mars with marginal notes presented in several languages. This map is nearing production, and we intend to explore how multi-lingual planetary maps (and supporting documentation) can be used effectively in several different countries.

Cartography, Reports

4. Communication of conclusions and ideas with groups representing a wide variety of international scientific and educational communities.

Commission on Gender and Cartography

1. To serve as a resource on issues related to gender and cartography :
 - by preparing papers for presentation at conferences or for publication in cartographic journals
 - by preparing and disseminating on the Web a basic, working bibliography on publications (professional papers, atlases, maps) related to gender that are of interest to cartography.
2. To study existing atlases for gender content and problems, keeping in mind the possibility of an ICAworld thematic gender atlas, by :
 - selecting a small set of national atlases, analyzing atlas contents, looking at gender data availability in those nations, and attempting to determine level of awareness of gender in those nations
 - outlining the barriers to producing a world thematic gender atlas and suggesting ways to overcome those barriers.

Commission on Maps and Graphics for Blind and Visually Impaired People

The commission aims to further international cooperation, communication and education in the design, production and use of maps and graphics for blind and visually-impaired people by :

1. exchanging and disseminating information on user's needs, design, production technologies including developing and appropriate technologies, and resources ;
2. providing guidance on, and encouraging, good and appropriate practice in design, production, and use (including that by other user groups) ;
3. developing communication and cooperation with organisations of and for blind and visually-impaired people involved in cartography, communication, education, and welfare.

The commission will pursue these objectives through the further development of its website, by the provision of workshops, and by the publication of papers, etc.

Commission on Cartography and Children

The mandate of the commission is to improve general cartographic literacy by

promoting the discussion about, awareness of, and research into the problems related to children as map makers and map users.

1. To maintain and build upon the commission's existing international database of people working or with interests in mapping and children so that this inventory can be made available on the World Wide Web, in digital or paper format
2. To enlarge the commission's select bibliography on topics related to mapping and children and the various technologies appropriate to generating cartographic images and solving spatial problems.
3. To develop closer links with other international bodies concerned with children. These would include the IGU Commission on Geographic Education, UNESCO, and UNICEF.
4. To assist the Executive of the ICA in the preparation of guidelines, and the organisation of the Barbara Petchenik Children's Map Competition.

Ferjan Ormeling

Cartographic Gathering in Bratislava

Fulfilment of my final commitment as President - to visit Slovakia - had to be postponed until after Ottawa. The invitation came from my good friend Professor Jan Feranec, Head of the Department of Cartography and Geoinformatics, Institute of Geography, Slovak Academy of Sciences, and Professor Cizmar, President of the Slovakian Cartographic Society. The event was a joint conference of the Czech and Slovakian Societies and so the visit provided a fine opportunity to meet old friends (and new) from both countries and find out more about their national and joint activities. Jan had organised a full timetable enabling me to make contact with various organisations, academic (Slovak University of Technology, Slovak Academy of Sciences, Geodetic and Cartographic Institute, and Comenius University) governmental (especially to meet Mr Hornansky, President of the Geodesy, Cartography and Cadastre Authority of the Slovak Republic) and commercial (from the large and impressive state-owned mapping



Cartographic gathering in Bratislava. Left to right: A Meciárová, M Ofukany, S Hudak, P Pavlicko, M Kosuch, P Vanis, M Szabová, A Benová

company VKU Harmanec, to the small but exceptional enterprise, MAPA Slovakia). I was also treated, by Professor Krcho, to an enthusiastic tour of that outstanding feat of Slovakian hydro-power engineering on the Danube at Gabčíkovo. The conference itself was impressive both in its lecture programme and the technical and map exhibitions. The

closing social gathering reflected the real ICA spirit of the region. With apologies to my 'older' colleagues (!) I have chosen to present (in the attached photo) some new friends - mapping science students attending the meeting... a rich future for the ICA.

Michael Wood

Maps and the Internet

A new commission on Maps and the Internet was established at the Ottawa meetings. The commission is a continuation of the Commission on Map Use. The chair of the Commission is Michael Peterson from the University of Nebraska at Omaha in the United States (Michael_Peterson@unomaha.edu). The vice-chair is Georg Gartner from the Technical University Vienna in Austria (gartner@tuwien.ac.at). The web page for the commission is located at "maps.unomaha.edu/ICA/Maps&Internet".

The following activities are planned for the year 2000.

1. The commission is co-sponsoring a workshop at the University of Applied Sciences in Munich, Germany, in March 2000 (see web page for date and time).
2. The chair of the commission is presenting the Keynote address at the Mapdays Conference in Gothenburg, Sweden. The conference is scheduled for March 29-31. A workshop may be held in conjunction with the conference.
3. The commission is co-sponsoring a one day symposium on Maps and the Internet in conjunction with the North American Cartographic Information Society (NACIS) in Knoxville, TN, USA, on October 11, 2000. The commission will also co-sponsor workshops to be held in conjunction with the conference (see web page for speakers and workshops). The NACIS web page is at www.nacis.org.

Please contact either the chair or the co-chair if you are interested in contributing to the work of the Commission or if you would like to be added to the mailing list.

Michael Peterson

Marine Cartography

The Marine Cartography Commission participated in the Workshop for Executive and Commission Chairs, held immediately prior to the ICC in Ottawa. It was apparent that such meetings bring about a better understanding of how the ICA Commissions are expected to work, a better appreciation of the aims and aspirations of each Commission and, as well, a clearer idea of where there might be overlaps or potential synergies between the various Commissions.

During the highly successful ICC itself, a meeting of the Marine Cartography

Commission was held. During the meeting, which was attended by 12 members, discussion was conducted around the Terms of Reference. The Terms of Reference were subsequently updated and were approved later the same week at the ICAGeneral Assembly.

Membership of the Commission is drawn widely and the great majority of the work is carried out by correspondence. Countries represented by membership are: Colombia; Canada; Iran; Guinea; Belgium; Colombia; Hong Kong and China; Israel; Spain; Portugal; Greece; Belgium; USA; Netherlands; Hungary; Denmark; Ireland; Mexico; Scotland; Australia; France; Tunisia; Argentina; Sweden; Finland; South Africa; Japan; Russia; Brazil; Croatia; and, Monaco. Liaison is maintained with IHO, ICA Executive, IGU and other bodies such as MSIA here in Australia.

I think the reader will agree that we have managed to reflect the wide international interest in both marine cartography and also the potential of GIS for the coastal zone.

It is appropriate for me to comment on a few of the objectives implicit in the terms of reference outlined in page 11.

TOR1 Dr Green, at the University of Aberdeen, has established a web site for our Commission but because of my inability to get material to him for some time, the site is out of date. The site will be updated in the near future. You will find the web site through the University of Aberdeen site, Dept. of Geography. I will publish the specific address following the expected updating of the site.

TOR2 Proceedings of all three CoastGIS were provided to delegates and were published. The best 25 papers for CoastGIS'99 held in Brest will come out as a published IFREMER publication under the editorship of Dr Populus of IFREMER. The Programme for the recently held CoastGIS'99 Conference was most successful. Around 180 scientists and professionals from many countries met in Brest in September 1999 for a most stimulating and successful third CoastGIS conference. Dr Populus and his many colleagues at IFREMER in Brest are to be congratulated on their most professional and rather brilliant efforts, with typical Gallic style, in bringing the conference to fruition. The next CoastGIS'01 is to be held in Canada under the local guidance of Dr Andy Sherin. We are very hopeful of persuading colleagues

in South Africa to take on the local organisation of CoastGIS'03 in South Africa contiguous to the 2003 ICC and General Assembly planned for Durban that year

TOR3 A publication put together by Dr. Dawn Wright and others which contains, among others, articles by some members of this Commission will be published shortly by Taylor and Francis. Articles were prepared after invitation. Details can be found at <http://dusk.geo.orst.edu/book>. December 1999 is the likely revised publication date.

TOR4 Dr Matyas Marton in the Department of Geography at the Eotvos Lorand University (Budapest) has work underway on the "Multilingual Gazetteer of the World Ocean". Since 1992, seven students have written their Masters' theses on this theme. The following parts of the gazetteer have been completed thus far:

- the small-scale maps of the World Ocean, showing the undersea relief;
- the list of the names of the different seas and bays, used in different languages;
- a list of the names of the different classes of undersea features, used in different languages;
- a multi-level system of undersea regions;
- the list of the different names of the undersea features. This list contains the names of about 5000 features and it is due to be extended continuously. This list and the multi-level system of undersea regions can be read on the World Wide Web.

Dr Marton intends to make an interactive map of the undersea geography of the World Ocean and it is hoped that this will be published on a CD-ROM. The research work also is presently working on the English/Hungarian version of the IHO Document "Standardization of Undersea Feature Names". Work is almost complete for presentation to the IHO and Mr Huet will be the liaison person at the IHB. Dr Marton's fax number is +36-1-372-2975 for those wishing to find out directly more about this work.

The next realistic opportunity for Commission members to get together in a face-to-face meeting will be during the next International Cartographic Conference scheduled to be held in Beijing in 2001. I hope to meet you all there.

Ron Furness, Commission Chair,

Commissions' Reports

Census Cartography

This is a new commission that was established at the 1999 ICA conference in Ottawa. We welcome feedback and comments from the ICA community. Activities planned for the term 1999-2001 include:

1. Expand the membership to include additional countries to gain the fullest representation possible.
2. Compile a bibliography on census cartography.
3. Compile a list of useful Web sites on census cartography.
4. Input information on the ICA Web site, such as the Terms of Reference, the bibliography (see #2), and the list of useful Web sites (see #3).
5. Commence a survey on the geographic units used by various statistical agencies to determine if greater harmonization of concepts is possible for census thematic mapping.
6. Arrange to have conference calls at least twice a year.
7. Attempt to have a joint meeting with the Commission on National and Regional Atlases (Spain, autumn 2000).

Tim Davis, Commission Chair, October 1999

Mountain Cartography

The social and economic importance of mountain regions has been increasing in the last few years. A growing use of alpine areas as leisure parks can be observed in the service societies of Europe, North America and Japan. In Central Europe, the alpine countries play a major role for transit traffic between Northern and Southern Europe. In third world countries the population pressure leads to a more intensive settlement and economic harnessing of mountain regions. Finally, the number of natural hazards with devastating consequences for man is growing in all of these areas due to this pressure and partially due to climatic influences. Together with the growing importance of mountain areas, the demand for adequate cartographic base data with respect to its contents, graphic design and the media is also increasing. Especially the visualisation of a large spectrum of new themes requires new cartographic methods and approaches which go beyond classical

topographic cartography. In this domain, cartographic research stands only at its beginnings.

During the 19th International Cartographic Conference in Ottawa, a new ICA Commission on Mountain Cartography has been established in order to meet these demands. The "seed work" for the establishment of this group has already been done in the Commission on High Mountain Cartography of the German Society of Cartography, mainly by organising the first Workshop on High Mountain Cartography in the Silvretta area in February 1998 (see ICA News No. 30).

Currently, the group consists of the following about 60 members. A new web-site <http://www.karto.ethz.ch/ica-cmc> is currently being installed. One of the first tasks of the group will be to structurise this site according to the sub-topics of mountain cartography and to collect links to existing mountain sites, projects, databases and other references. This is being discussed at the first group meeting on November 7 in Vienna.

The second Workshop on Mountain Cartography will take place at the Rudolfshuette in Austria from March 29 to April 2, 2000. The Call for Papers can be found at: <http://www.tu-dresden.de/fghgik/aktuell/high.htm>

If any of the readers of ICANews is interested to actively participate in this group, please contact the chair or another member of the group.

Lorenz Hurni, Commission Chair, October 1999

Mapping from Satellite Imagery

Join us! A call from the Commission on Mapping derived from Satellite Imagery. This important Commission, re-established at Ottawa this year under the new chair, Serge Le Blanc, is looking for members.

Although many enthusiastic responses have been received to Serge's initial invitations for membership, most prefer to act as correspondents. To be successful a Commission needs active members. So far there are six in this core but more are required. Please indicate, as soon as possible, the aspects of this subject which interest you

and in which you could play an active role. Would you also be willing to lead one of the working groups of the Commission?

Please provide a brief CV and your complete postal address including phone, fax and email. Serge's contact details are: Serge Le Blanc, Spot Image, 5 rue des Satellites, BP 4359, F-31030 Toulouse Cedex 4 - France. Tel: +33 (0)5 62 19 40 99 Fax: +33 (0)5 62 19 40 52; Email: Serge.le_blanc@spotimage.fr Web : <http://www.spotimage.fr/>

As Executive liaison to this Commission, and an enthusiast for the subject, I am anxious to encourage its healthy development over the next few years. I thank those who have already agreed to join the active team and hope that some readers of ICANews will join in this important research thrust for the future of cartography.

Michael Wood (Past President)

Theoretical Cartography

The commission "Theoretical Cartography" continues the fruitful activities of the commission "Theoretical Fields and Definitions in Cartography" (1995-1999). The Chairperson is Alexander Wolodtschenko (Germany), Vice-Chair is Hansgeorg Schlichtmann (Canada) and ICA EC Contact person is Takashi Morita (Japan). So far, the commission has recruited seventeen candidates, and it is expected that several nominations will arise from the national committees in the near future. Future commission events include (for the next two years):

- participation in the meetings of the Commission Education and Training, to be held in Budapest, Hungary, in February 4-6, 2000, and in Apatity, Russia, from August 22 to 24, 2000, during InterCarto VI conference;
- A seminar on 'The Selected Problems of Theoretical Cartography 2000' to be held in Dresden, Germany, October 14-15, 2000,
- commission meeting in Beijing, China, during the 20th ICA Conference,
- establishment of a home page on the WWW for dissemination of the commission's information.

Alexander Wolodtschenko.

Invitation and Call for Papers

The Local Organizing Committee of the 20th International Cartographic Conference, Beijing, 2001, invites abstracts for papers proposed to be delivered as part of the scientific conference program.

There are 27 technical topics of the Conference, including Education and Training in Cartography, History of Cartography, Cartography and the Environment, Marine Cartography, Satellite Mapping, GIS and Digital Mapping, Mapping on the Internet and the World Wide Web, Cartography and Children, Spatial Data Visualization, and Global Mapping, amongst others. Authors should indicate which one of the following topics is addressed. A full detail of the topics is available in the Web site specially created for this event (www.sbsm.gov.cn/icc2001/). The abstract should be 300-500 words long in English, the conference language.

Important Deadlines:

September 1, 2000: typed abstracts must be received by the Local Organizing Committee.

December 1, 2000: notification to the authors of the acceptance as session paper or poster.

April 1, 2001: fully typed version of the papers accepted for oral presentation and publication in the conference proceedings must be received by the Local Organizing Committee. Only the papers received by this date are assured publication in the proceedings. Abstracts and papers should be mailed to the following address:

Local Organizing Committee for ICC 2001

State Bureau of Surveying and Mapping of China (SBSM)

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www.sbsm.gov.cn/icc2001/

(extracted from the Web site and the 1st Circular sent by Mr Bai Bo, Vice Chairman LOC for ICC 2001)

Barbara Petchnik Children's Maps Award: 2001 Competition

Rules for the 2001 Barbara Petchnik Award are as follows:

- ICA member nations will collect maps from children less than 16 years old, on the theme: "A World Map". Each national

committee will select a maximum of 5 maps according to its own criteria, such as subject, age groups (for example, three age groups under 9 years, 9 to 12 years and over 12 years of age.), etc.

- The maximum size of a map must not exceed A3 (42 cm x 29.7 cm or 17 x 11 inches). Each map, preferably in colour, should represent the whole world rather than a part of it.
- Each map must have a title, and the name, age, school address and country of its author: all this information must be written on a label attached to the back side of the representation. It should be printed clearly or typed by the teacher or another adult (which may be on a separate sheet of paper attached to the map).
- The maps selected by the national committees must be sent to the ICA Secretary General by 15 June 2001 at the latest. They will be displayed during the 20th International Cartographic Conference of the International Cartographic Association in Beijing, China 6-10 August 2001.
- The winning entries will be submitted to the UNICEF International Art Committee for consideration as greeting card designs. They may be used by ICA as well. Any participant agrees that his/her representation may be reproduced by ICA, UNICEF or others without consultation or copyright fees.

Note that any original artwork selected for a greeting card will have to withstand appropriate reduction in size.

The guidelines for handling the 2001 Barbara Petchnik Award are as follows:

- The aim of the competition is to promote children's creative representation of their world, to enhance their cartographic awareness, and to make them more conscious of their environment.
- Five to fifteen awards will be given, with a maximum of one per country, preferably one to each continent with at least one award given to children in each of the three age groups; under 9 years, 9 to 12 years, and over 12 years of age.
- The Petchnik Award Committee will be established by the ICA Executive Committee prior to the conference at which the contest is taking place.
- Each member nation is advised to nominate a coordinator to run the contest at the national level.
- National bodies submitting their selected entries to the ICA Secretariat are requested to ensure that each map title is also provided in either of the ICA's official languages (French and English).

- Participating nations are encouraged to collect and archive the maps for further research. They are invited to report on their use of the collected drawings, to evaluate the process they used, and to give suggestions to the ICA Executive Committee for guidelines and rules for a 2001 award.
- National bodies are responsible for distributing the certificates awarded by the ICA and provided by the Secretariat.

Ferjan Ormeling, Secretary General

Travel Awards for ICC 2001, Beijing, China

A limited number of travel awards to the International Cartographic Conferences of the ICA will be made to young cartographers who are nationals from developing countries. ICA generally uses the United Nations definition of developing country, which can be found in the U.N. Statistical Yearbook. Recent definition includes all countries in Africa, South and Central America including the Caribbean, and much of Asia and Oceania.

Applicants must be giving a paper at ICA for the first time and be 35 years old or less. They must send a full copy of the paper as well as abstract to the Conference Secretary and to the ICA Secretary-General in time to arrive by **15 December 2000**. In addition, applicants must arrange for a letter of support from a recognised cartographer from the home or other country (due at the same time as the paper; writer sends it to the Secretary-General).

Applicants should have at least a certificate beyond their high school education. Papers must be original and clearly written with appropriate citations and credits. Papers should be reports on research studies or other cartographically-related projects.

Awards will cover transportation (economy excursion ticket) and registration at the conference. The Executive Committee will make an effort to spread the awards regionally and to include both men and women. Up to 15 awards will be made depending on number and quality of submissions. Preference may be given to applicants from member countries in good standing but the competition is open to young cartographers in all developing countries.

Notification of awards will be provided by 1 March 2001. Further information can be obtained from the ICA Secretary General: Ferjan Ormeling, P.O. Box 80115, 3508 TC Utrecht, the Netherlands; fax: +31 30 2540604; e-mail: f.ormeling@geog.uu.nl

Ferjan Ormeling

Future Dates

For Your diary

A conference on 'Teaching maps for children: theories, experiences and perspectives beginning the 3rd Millennium' is being organised by the ICA Commission on Cartography and Children, at 'Eötvös Loránd' University, Budapest, Hungary, from September 6 to 8, 2000.

Abstracts specifications and further details are available at <http://lazarus.elte.hu/hun/dolgozo/jes> or by email to: Jesús Reyes Nuñez (jesus@ludens.elte.hu). Contact address: Jesús Reyes Nuñez, Eötvös Loránd University

Department of Cartography, Pázmány Péter sétány 1/A, Budapest 1117, Hungary.

The abstract may be sent as a paper document (snail mail, airmail or faxed) to the organising committee (address above) or electronically within a regular e-mail document or as a WORD 6 or WORD 97 attachment. Deadline: December 10, 1999.

Geomatics 2000
Montreal, Canada,
from 8 – 10 March 2000
Contact: Diana Nivelle,
Canadian Institute of Geomatics.
Tel.: 514 383 3679
Fax: 524 383 7166
Email: diana.nivelle@simpatico.ca

28th Symposium on Remote Sensing of the Environment.
Cape Town, South Africa,
from 27-31 March 2000.
Enquires to: Jim Weber,
Tel.: 1 (410) 455 5573,
Fax: 1 (410) 455 5575,
Email: isrse@symposia.org

ASPRS Annual Conference 2000
Omni Shoreham Hotel
Washington, DC, USA,
From 22 – 26 May.
Enquires to: Tel.: 1 301 493 0290
Fax: 1 301 493 0208
Email: asprs@asprs.org

International IT Conference on Geo-spatial Education
Hong Kong Conference and Exhibition Centre, Hong Kong,
From 6 – 8 July 2000.
Enquires to: Berlina Ho,
Conference Secretary, ITCGSE,
Dept. of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong.
Email: lsitcgse@polyu.edu.hk

ISPRS 2000
RAI Congress Centre, Amsterdam, The Netherlands,
From 16-23 July
Enquires to: Saskia Templeman, Secretary, Local Organising Committee, P.O. Box 6, 7500 AA, Enschede, The Netherlands.
Tel.: 31 (53) 487 4358,
Fax: 31 (53) 487 4335,
Email: isprs@itc.nl

VI International Congress on Sciences of the Earth
Diego Portales Convention Center, Chile,
From 7 – 11 August 2000
Enquires to: Instituto Geografico Militar de Chile, Nueva Santa Isabel 1640, Santiago, Chile.
Tel.: 562 460 6813 / 460 6814
Fax: 562 460 6978
Email: igm@igm.cl

29th International Geographical Congress
Seoul, South Korea
From 14 – 18 August 2000
Enquires to: Tel.: 82 (2) 876 0401,
Email: igcseoul@plaza.snu.ac.kr

Second European GIS Education Seminar
Budapest, Hungary,
From 7 – 10 September.
Enquires to: Bela Markus, SE FFFK, P.O. Box 52, H-8000 Szekesfehervar, Hungary,
Tel.: 36 (22) 312 988,
Fax: 36 (22) 327 697,
Email: mb@sclm.hu

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Correction

The ICA Newsletter 32, contained a list of Member Countries (page 6). Unintentionally, Iran was not published in the list. We apologise for this mistake and acknowledge Mr Behadad Ghazanfari for noting and reporting this mistake.

Editor