



CARTOGRAPHY SPECIALTY GROUP

Volume 21, Number 2

Spring 2001

Words from the Chair

Matt McGranaghan

First, I would like to congratulate the membership on a job well done at this year's annual meeting. The CSG's sponsored sessions presented a good overview of our interests to the broader community and stimulating for our membership. The organizers and presenters all deserve our thanks and commendation.

Second, I would like to thank the Board for their service. Volunteering to serve an organization such as this is most often its own reward, but you all should know that your efforts are appreciated.

Next, I want to bring to your attention efforts which were raised at the annual meeting, toward which the CSG membership might contribute. One was a request from Reg Golledge (golledge@geog.ucsb.edu) for cooperation on the Geography Research and Education Network. This, I understand, is intended as a web-link-based digital library of course resources, lecture notes, laboratory and exercise units, and case studies (perhaps developed in support of more formal publication), which display the kinds of things geographers know and can do. In addition to materials, web programming support is also needed.

A somewhat similar request was made by Ron Ablner (rabler@aag.org). The AAG is reworking its "Careers in Geography" information on the web, with an eye toward recruiting undergraduate students to geography in preparation for non-academic jobs. To that end, a set of vignettes (300-400 words and a photograph or two) featuring recent graduates at work in non-academic jobs is sought. Things with "undergraduate appeal" are especially desired. I encourage you to think how you can contribute to these efforts.

Turning to the CSG, there are a couple of issues on our agenda for this year. One is consideration of a name change for the CSG; there are essays offering arguments for and against the change in this newsletter. Give these arguments your full consideration. (I won't weigh-in on this issue from the Chair's Column.)

We also have some by-laws changes before us, relating to the use of email as a medium for voting within the CSG. According to the AAG we have 472 members, the email list (extracted from the AAG's membership information) has 373 members with valid email addresses that do not generate "permanent delivery" errors, and of those about two dozen will generate various transient delivery errors for any given mailing. Thus, approximately 75% of the membership is reliably reached very quickly and inexpensively by email, 20% are not reached this way, and 5% may or may not get a message to the list.

Finally, it is time to plan sessions for the 2002 Annual Meeting. You probably already have the May AAG Newsletter with its Call for Participation. I encourage you to participate through presenting your recent work and by organizing sessions and workshops. The CSG relies on the Vice-Chair to coordinate our program with the AAG's program committee: session organizers, please make contact with Rex Cammack, to make the assembly of the program as smooth as possible.

Have a productive and enjoyable summer!

Matt
matt@hawaii.edu

Matt McGranaghan, Cartography Specialty Group Chair
Associate Professor
Department of Geography
University of Hawai'i at Manoa

Name Change of the CSG: Pro

Jeremy W. Crampton

As we consider the pros and cons of changing the CSG name we might take a glance at the first issue of the (true!) new millennium of the journal *Cartography and GIS (CaGIS)*. This is a special issue devoted to a series of reports on cartography and geovisualization.

The editors, long-time CSG member Alan MacEachren (PSU) and his colleague Menno-Jan Kraak (ITC, Netherlands), identified four major topics in geovisualization: *representation, integration* with computational methods, *interface design*, and *cognitive / usability* issues. These four areas were discussed under the aegis of the International Cartography Association (ICA) Commission on Visualization and Virtual Environments, which was first formed in 1993.

All of these four areas would seem to have strong ties with the interests of CSG members. For instance, representation includes problems of how to show the large geospatial data sets typically well captured in the map's power to synoptically present data. Consider the cancer choropleth maps cited in Edward Tufte's first book, which each portray some 21,000 numbers, or the even more remarkable depiction of 1.3 million galaxies in the northern galactic hemisphere. As Tufte observes, "no other method for the display of statistical information is so powerful [as the map]." But even these numbers pale in the face of today's "terabyte challenge" (1,048,576 megabytes), the size of much spatial data (e.g. a digital immersive environment for scientific collaboration). What are the representational methods and concepts needed to handle such large data volumes? On the one hand cartographers might seem well positioned to address this issue by dint of their focus on the visual, but on the other hand the history of the discipline offers only scanty knowledge on these emerging issues such as building interactivity variables into a map-enabled cell phone or PDA.

Keith Clarke, past-Chair of the CSG, argued for increasing "democratization of cartography" in his CSG Newsletter column for Winter 1996. By this he meant taking the tools and benefits of what he called "mapping and visualization" out of the sole hands of cartography and putting them into those of the "citizens of the real world." I think he's right. What does this involve? The Open GIS Consortium (OGC) has estimated that up to 80% of all data is spatially referenced, including business data. This is potentially a huge market: some estimates place the size of Locationally Based Services (LBS) at a staggering \$40 billion by the year 2006 (up from \$1 billion in 2000). Now that the US government has mandated that by October 2001 your location must be provided when making an emergency call on a cell phone, we can expect to see even more interest in

this area. Cartographers are a player in this game, but we must reach out to those in GIS, GPS, wireless technology and Internet mapping. The concepts of geovisualization allow us to go beyond the traditional role of maps which present the conclusions of the cartographer, to show that they can be extraordinarily powerful tools for exploring data for the goal of knowledge construction. What better way to place those tools into the hands of scientists or local communities on the wrong side of the "digital divide" than by working to provide knowledge construction tools for spatial data?

Ironically, *CaGIS*, where these papers appear, has itself gone through changes of name. Not without some debate did it change from *The American Cartographer* to *Cartography and Geographic Information Systems* to *Cartography & Geographic Information Science* (emphasizing scientific enquiry rather than technologies). There was some fear at the time that cartography would be swallowed by GIS/GISci, a fear debated at Judy Olsen's AAG Presidential Plenary Session under the question "Has GIS Killed Cartography?"

Has it? I don't know. What is clearer is that the fear has subsided somewhat as people are increasingly realizing that the discipline and practice of cartography has been evolving all along, and is now evolved to such an extent that the word "cartography" is not sufficiently descriptive enough to capture it all. And it seems that what we faced with GIS we now face with geographic visualization. Call it the "Fermat Syndrome," after the mathematician who made a note in a book of arithmetics he was reading that he "had discovered a marvelous proof, but alas this margin is too small to contain it." What is also clearer is that the new millennium sees a mind-boggling increase in interest in mapping, almost all of it outside of the traditional boundaries of the cartographic discipline (I've argued before that Mapquest.com is the largest publisher of maps in the history of humanity). We truly are seeing the "democratization of cartography."

Cartography continues, to be sure, with some of its longstanding interests such as map design and map use, but in such radically different contexts, and with the new challenges such as those described in *CaGIS*, that it is truly suffering from the Fermat Syndrome. But we need not fear an *abandonment* of traditional cartographic concerns if we embrace geovisualization, as a recent article by Anne Kelly Knowles points out (*Cartographic Perspectives* Spring 2000). Knowles found that teaching geographic visualization *without* GIS can be an effective way of getting students to think spatially. Geographic visualization need not always use expensive and advanced technologies; it is an equal opportunity set of tools and concepts. Indeed, as Knowles shows, it can readily be used

in historical cartographic studies or the history of cartography itself.

In conclusion therefore, a judicious solution to this situation, and the one supported here, is to expand the name of the group to include the expanded activities of many of its members. I urge you therefore to vote "yes" to the name change.

Name Change of the CSG: Con

Keith Clarke

Cartography is a discipline of continuity. Varenus' General Geography of 1650 varies only marginally in content from the basic cartography of a contemporary textbook. In contrast, Geography has broadened considerably since, and now includes many sub-disciplines well represented by the AAG specialty groups. While disciplinary splinter groups are one way to capture breadth, this is not a way to capture the integrated nature of contemporary science. Cartography too has seen a transition to integration, largely because of the introduction of the computer. Traditional divisions within the discipline (map design, communication, mathematical cartography, geodesy) have been considered less important than a content-based definition that has been highly effective, i.e. it must involve a map. This loose definition has allowed very disparate cartographic interests, including those of map historians, collectors, practitioners and scientists, to coexist peacefully. I am concerned that a name change will create unnecessary division, to the detriment of all.

Now we have a new fad, Geovisualization, seeking to rename that which already exists. In doing so, it adopts a single viewpoint, increasing the importance of a sub-discipline to disciplinary status. Quite simply, visualization is and always was part of cartography. Naming it as a separate but equal sub-discipline not only excludes those interested in maps for other reasons, but also diminishes the whole, the integrative nature of cartography as a single discipline that straddles science, social science, art and the humanities.

Visualization itself is far broader than being simply a part of cartography. It is indeed a new scientific method. I have used the definition "use of the human visual processing system assisted by computer graphics, as a means for the direct analysis and interpretation of information." This is a form of reasoning, and clearly it includes reasoning without the use of maps. Non-map graphics, valuable as they may be for data exploration, are simply not maps. This does not mean that non-traditional maps are not cartographic, on the contrary cartography has easily absorbed those graphic devices that have a clear tie to geographic space, such as virtual images, three-dimensional renderings, and perspective views. So

including visualization as equal to cartography erases the only unifying component of the definition of cartography as a discipline, i.e. the map.

There are many superficial reasons not to change. A sure way to communicate confusion and weakness to other disciplines is to continuously change names with the fashions and euphemisms of the era. Librarians hate title changes. Departments have new strengths or weaknesses in relation to the new way of defining our group. Public recognition with a single concept will diminish. Schoolchildren will be confused. We will lose membership. We will lose our distinction from other specialty groups.

In summary, I simply pose the question why? If sensible and profitable benefits are to be gained by a name change, then I'll gladly be first to vote in its favor. If the change serves narrow interests and disunity, then quite simply, include me out!

USGS Offers US Forest Service Maps

Joseph Kerski

To provide a greater access to maps of the nation's 192 million acres of national forests and grasslands, the U.S. Geological Survey (USGS) and the U.S. Forest Service have entered into an agreement to make Forest Service maps available from the USGS.

The new agreement is an expansion of a successful pilot program began two years ago by the Forest Service Rocky Mountain Region and the USGS. Under the new agreement, all Forest Service regional offices will be able to participate in the USGS map sales program.

Previously, the maps were available only from Forest Service offices, select interpretive associations, and limited retail sales outlets. Now they can be ordered from the USGS or any of its authorized re-sellers in the business partner network, which can be viewed at <http://mapping.usgs.gov/esic/usimage/dealers.html>. The USGS sells and distributes about 3 million paper maps every year, and the new one-stop shopping will allow customers to purchase USGS topographic and Forest Service maps together, providing enhanced customer service.

USGS topographic maps usually show both natural features such as mountains, valleys, plains, lakes, rivers and vegetation, and constructed features such as roads, boundaries, transmission lines and major buildings. A Forest Service map will complement these features with information on available recreation use, local plant and wildlife information, trails and visitors centers, facilities available, campgrounds and picnic areas, color

photographs of points of interest and activities. National forests and grasslands can be located on the Internet by using an interactive map at <http://www.fs.fed.us/recreation/map.shtml>.

1970 National Atlas Online

The best collection of twentieth century maps of the United States is now online, thanks to the Library of Congress. The Library has digitized and republished all of the maps from the 1970 National Atlas of the United States®. The entire collection of high-quality, full-color atlas maps may be viewed at <http://memory.loc.gov/ammem/gmdhtml/census3.html>.

The current set of National Atlas maps are online at: <http://www.nationalatlas.gov>

This site, a combined effort of over 25 federal agencies, state agencies, and ESRI, features aquatic biology, population, mining, manufacturing, human health, and a host of other measures and features.

The USGS can be contacted by phone at 1-888-ASK-USGS, on the Web at <http://ask.usgs.gov>, or by e-mail at ask@usgs.gov. Pricing information and available maps can be viewed on the web at <http://rockyweb.cr.usgs.gov/forests/service/index.html>.

AAG Visualization Sessions, 2001 and 2002

Max Beavers

The visualization sessions co-sponsored by the Cartography Specialty Group, Geographic Information Systems Specialty Group, and the Environmental Perception and Behavioral Geography Specialty Group at the 2001 AAG Annual Meeting in New York City were a great success! Many thanks to the participants who made the sessions so interesting and informative, and to the organizers of related sessions in the series (Andre Skupkin, Sara Fabrikant, Scott Bell, and Tony Richardson). Thanks also to the members of the audience for their attendance and attention! And special thanks to Scott White, co-organizer of the series.

At the 2001 Meeting, there were a total of 25 participants in five different sessions over two days. Participants came from academia and government research centers. Over 21 different academic institutions were represented from the U.S. and abroad.

The sessions in visualization at the 2002 meeting in Los Angeles will once again be organized by Scott White of Fort Lewis College (white_s@fortlewis.edu) and Robert Maxwell Beavers of Samford University (rmbeaver@samford.edu). Please contact them if you are

interested in participating in or organizing a visualization session, or if you are thinking of organizing a related session.

Application materials must be forwarded to AAG as a group, so please adhere to the earlier deadlines provided in the following list. Your application materials, registration forms and fees should be sent to Scott White (white_s@fortlewis.edu), not to AAG. The collected materials will be sent to AAG as a group immediately after the deadlines listed below.

AAG Deadline for PAPER abstracts is 8/31/01 – **Scott's deadline** for receiving all application materials (including registration form and fees) for PAPER presenters is 8/24/01.

AAG Deadline for ILLUSTRATED PAPER abstracts is 9/28/01 – **Scott's deadline** for receiving all application materials (including registration form and fees) for ILLUSTRATED PAPER presenters is 9/21/01.

Maps and the Internet Workshop

Michael Peterson

The ICA Commission on Maps and the Internet is sponsoring a workshop in Guangzhou, China, in association with South China Normal University, the Guangdong Academy of Sciences and the ISPRS Commission IV/2. The workshop will be July 31-Aug. 2 at the Baiyun Hotel in central Guangzhou. Immediately following the workshop, Dr. Jianya Gong of Wuhan University will accompany the participants to Wuhan and provide a tour of the National GIS Laboratory. From here, the group will proceed on to the International Cartographic Congress in Beijing.

The Preliminary Program for the workshop can be found at <http://maps.unomaha.edu/ica/Maps&Internet/Upcoming/Meetings.html>

If you would like to reserve a room at the Baiyun Hotel to attend the workshop, please contact Dr. Bin Li at bin.li@cmich.edu.

National Geographic Cartography Awards

David Miller

National Geographic is pleased to announce that Rus Maki, St. Cloud State University, Minnesota, and Colleen Le Drew, Centre of Geographic Sciences, Nova Scotia, won this year's National Geographic Society Award in Cartography.

Rus Maki received \$800, along with a National Geographic atlas, because of his strong academic achievement in cartography. His map entry, "Invasion of the Zebra Mussels," is a dynamic map composition with horror-movie potential. Colleen Le Drew received \$400 for her high academic performance. Her entry, "The Lighthouses of Southeastern Australia," visualizes a historic theme and is rich in color and symbolism. These award winning maps can be viewed on the National Geographic Cartography Award website

<http://www.nationalgeographic.com/maps/caward>, which also provides information about the competition.

National Geographic thanks all students who took the time to apply for this award. The map submissions were professionally done and covered a variety of intriguing themes. Also, please consider entering next year if you qualify--often students win the award on the second application.

Below is a list of student participants from this year's competition:

- Matt Aubuchon, Auburn University;
- Jason Kenna Blackburn, Louisiana State University;
- Martha Bostwick, Centre of Geographic Sciences, Nova Scotia;
- Dan Deneau, Centre of Geographic Sciences, Nova Scotia;
- Erica Feldkamp, Humboldt State University;
- Susan Finger, Middle Tennessee State University;
- Brian Kaplan, Georgia State University;
- Michele Loda, Universita degli Studi, Italy;
- Pete Martin, Oregon State University;
- Douglas Morton, Humboldt State University;
- Lady Murrugarra, University Inca Garcilazo de la Vega, Peru;
- Slobodan Saveski, Geography Institute, Macedonia;
- Jeff Stone, University of Wisconsin-Madison;
- Kyle White, University of Calgary

CSG Student Paper Honors

Aileen Buckley

The Cartography Specialty Group sponsored the annual Honors Competition for Student Papers on cartographic topics at the 2001 Meeting of the AAG in New York City. Congratulations to the participants in this year's competition!

First Place - \$500:

Erik B. Steiner, Department of Geography, The Pennsylvania State University, University Park, PA 16902. "Region Representation and Cognitive Distance Distortion."

Second Place - \$250:

Isaac Brewer, Department of Geography, GeoVISTA Center, The Pennsylvania State University, University Park, PA 16802. "The Design and Implementation of Temporal, Spatial, and Attribute Query Tools for Geovisualization."

Congratulations for selection as finalists to:

- James B. Herrington, Department of Geography, Virginia Tech, Blacksburg, VA 24060. "The Use of Animated Maps in the Classroom."

- Amy L. Griffin, Department of Geography, GeoVISTA Center, The Pennsylvania State University, State College, PA 16801. "Feeling It Out: The Use of Haptic Visualization for Exploratory Geographic Analysis."

Master's Thesis Research Grant Award

Masters students, begin your summer by writing up your research proposal for possible support by the CSG! June 15 is the next application deadline for the CSG's Master's Thesis Research Grant Program. These grants are available to masters students working on cartographic research and who are enrolled in a geography degree program. Grants are available up to \$300 and may be used for items necessary to research such as travel, materials, equipment, and human subject fees.

An application form can be obtained from the Non-Academic Director (contact information follows). The student also will submit a three-page description of the research plan, and human-subjects clearance (if the research involves human subjects) must be obtained before grant money can be awarded. Three people review each proposal. Other deadlines for submission are November 1 and March 15 of each year. For more details on the program, go to

<http://www.csun.edu/~hfgeg003/csg/master.html>

Trudy Suchan
CSG Non-Academic Director
U.S. Census Bureau
4700 Silver Hill Road, Stop 8800
Washington, D.C. 20233-8800
(301) 457-2419
trudy.a.suchan@census.gov

2002 Student Poster Competition

The RSSG, GIS-SG, and Cartography (CSG) specialty groups are once again co-sponsoring a student poster competition at the 2002 Annual Meeting in Los Angeles, being held March 19th to 23rd, 2002. The main theme of the poster should deal with scientific developments in or applications of remote sensing,

GIS, or cartography. The student is required to be the sole or first author.

Awards will be given for the top three posters. Students must be current members of one of the three AAG specialty groups by the AAG abstract submission deadline (28 September 2001). The student should submit the abstract by 17 September 2001 to be eligible to enter the competition.

After the final competitors have been selected they will be notified to re-submit their abstract online individually (this on line submission must be completed by 28 September 2001).

Detailed information on AAG program participation can be found in the June AAG Newsletter and on the AAG web home page during the first weeks of June (<http://www.aag.org>). Specific information on the student illustrated poster competition can be found on the RSSG web page (<http://www.earthensing.com/rssg/index.html>) or by contacting the sources listed below. We encourage you to participate!

Any questions can be directed to Ludmila Monika Moskal, RSSG Student Director, at the Department of Geography and Kansas Applied Remote Sensing Program, University of Kansas, voice: (785) 864-7728, fax: (785) 864-0392 or email: moskal@ukans.edu.

British Cartographic Society Symposium

An invitation has been extended to attend the British Cartographic Society's 38th Annual Symposium and Map Curator's Workshop, scheduled for September 13th to 16th at the University of Liverpool.

Sessions will include Maritime Mapping, Marketing Maps and Cartographic Products, Ordnance Survey Review and Prospects, Mapping Urban Spaces, The Geography and History of Liverpool, Helen Wallis Memorial Lecture, and a Map Curator's Group (theme: acquisition).

For more information contact:
David Fairbairn, BCS Programme Committee Chairman,
Dept. of Geomatics,
University of Newcastle upon Tyne,
Newcastle upon Tyne NE1 7RU, UK.
Tel +44 (0)191 222 6353 Fax +44 (0)191 222 8691
e-mail Dave.Fairbairn@ncl.ac.uk

British Cartographic Society web site is at
<http://www.cartography.org.uk/>
Latest symposium news on
<http://www.cartography.org.uk/Pages/Latest/Sympos.html>

Calendar

July 9-13, 2001. ESRI International User Conference. San Diego, California.
<http://www.esri.com/events/uc>

July 9-August 10, 2001. Popular Cartography and Society: A Summer Institute in the History of Cartography. Chicago, Illinois. For information email Susan Hanf at hanfs@newberry.org

July 31-August 2, 2001. Workshop on Maps and the Internet in Guangzhou, China, preceding the 20th International Cartographic Conference in Beijing 2001. For information email Michael Peterson at Michael_Peterson@unomaha.edu

August 6-10, 2001. International Cartographic Association Annual Meeting. Beijing, China.
<http://www.sbsm.gov.cn/icc2001/>

September 13-16, 2001. 38th Annual Symposium and Map Curator's Workshop of the British Cartographic Society. University of Liverpool, England. For information contact David Fairbairn at Dave.Fairbairn@ncl.ac.uk

September 19-23, 2001. Conference on Spatial Information Theory. Morro Bay, California.
<http://www.geog.ucsb.edu/cosit01/>

October 3-6, 2001. North American Cartographic Information Society Annual Meeting. Portland, Oregon.
<http://www.nacis.org/meetings.html>

Newsletter Deadline

Submission of items for the CSG newsletter must be received by September 30th for the Fall issue. Please send your articles to:

Max Beavers
Department of Geography
Samford University
Birmingham, Alabama 35229
rmbeaver@samford.edu

Address Changes

The CSG receives its email addresses and mailing labels from AAG Headquarters. Changes or corrections to the mailing list should be sent to:

Director of Membership
Association of American Geographers
1710 Sixteenth Street, NW
Washington, DC 20009-3198
address@aag.org

2001-2002 CSG Officers

Chair (2001-2002)

Matt McGranaghan
Department of Geography
University of Hawai'i at Manoa
2424 Maile Way
Honolulu, Hawaii 96822
matt@hawaii.edu

Vice Chair (2001-2002)

Rex Cammack
Department of Geography, Geology, and Planning
Southwest Missouri State University
Springfield, Missouri 65804
cammack@cart1.smsu.edu

Secretary/Treasurer (2000-2002)

Elisabeth Nelson
Department of Geography
The University of North Carolina at Greensboro
Greensboro, North Carolina 27402
esnelso2@uncg.edu

Academic Director (2000-2002)

Jeff Torguson
Department of Geography / Stewart Hall 359
St. Cloud State University
720 Fourth Ave South
St. Cloud, Minnesota 56301-4498
jtorguson@stcloudstate.edu

Academic Director (2001-2003)

Alison Feeney
Geography Earth Science Department
Shippensburg University
Shippensburg, Pennsylvania 17257
aephil@wharf.ship.edu

Non-Academic Director (2001-2003)

Trudy Suchan
United States Census Bureau
4700 Silver Hill Road, Stop 8800
Washington, DC 20233-8800
trudy.a.suchan@census.gov

Student Director (2001-2002)

Bridget Beesley
Department of Geography
University of South Carolina
Columbia, South Carolina 29208
beesleyb@mailbox.sc.edu

Past Chair (2001-2002)

James Lowry
Department of Geography / ECU Box Q2
East Central University
Ada, Oklahoma 74820
jlowry@mailclerk.ecok.edu

Newsletter Editor

Robert Maxwell Beavers
Department of Geography
Samford University
Birmingham, Alabama 35229
rmbeaver@samford.edu