

# ON THE CATALOGING/CATALOGUING FRONT

Map Cataloging Discussion Group, 27 June 1999

Ernest M. Morial Convention Center 216

The discussion group meeting was called to order at 8:00 A.M. on Saturday by Chair Josephine Davidson.

Jo announced that ALCTS was soliciting new members with the "each one reach one" program. She also announced a new column in the ALCTS bulletin called "Viewpoints," in which members can write articles about career issues. Interested persons can contact Dale Swensen by e-mail: ([dale\\_swensen@byu.edu](mailto:dale_swensen@byu.edu)). (The discussion group is co-sponsored by MAGERT and ALCTS.)

The first item of business on the agenda was the selection of a new chair for the group. Lucinda Hall of the University of Minnesota and a regular participant in the group graciously volunteered and will lead the group for the next year.

The announced topic for the discussion was "The Road Often Traveled: Training and Orientation of Map Catalogers." Jo introduced the topic by mentioning that she had talked to two catalogers at the University of Georgia one currently pursuing an MLS degree and one five to six years out of library school. Neither had encountered much more than a mention of map cataloging during their formal library science education. Their experience reflects the reality that new map catalogers usually need training.

Jo provided several excellent handouts to aid in the discussion. The first was a list of essential tools for cataloging cartographic materials. The tools listed were:

*Cartographic Materials: A Manual of Interpretation for AACR2*, prepared by the Anglo-American Cataloguing Committee for Cartographic Materials. Chicago: American Library Association, 1982 (currently being revised).

*Cataloging Government Documents: A Manual of Interpretation for AACR2*. prepared by the Documents Cataloging Manual Committee, Government Documents Round Table, American Library Association. Chicago: American Library Association, 1984 (currently being revised).

*Geographic Cutters*. 2<sup>nd</sup> ed. Washington, D.C.: Library of Congress, 1988.

*Guidelines for Distinguishing Cartographic Materials on Computer File Carriers from Other*

*Materials on Computer File Carriers*. 1998. Available on the Internet at: [www.locweb.loc.gov/marc/cfmap.html](http://www.locweb.loc.gov/marc/cfmap.html)

*Library of Congress Classification. Class G*. 4<sup>th</sup> ed. Washington, D.C.: Library of Congress, 1976.

*Map Librarianship: An Introduction*, by Mary Larsgaard. 3<sup>rd</sup> ed. Englewood, Col.: Libraries Unlimited, 1998.

One important resource was omitted from the list:

*Map Cataloging Manual*, prepared by Geography and Map Division, Library of Congress. Washington, D.C.: Cataloging Distribution Service, Library of Congress, 1991.

The list Jo handed out was one used as a handout at a training workshop conducted by the Geography and Map Division of the Library of Congress. G&M's manual was the primary resource being used for this training session. The list included only additional references.

One of the participants mentioned another useful resource:

*Types of Maps*. Reston, Va.: U.S. Geological Survey, 1991.

A question was asked about the revision of *Cartographic Materials* and *Cataloging Government Documents*. The former revision is currently awaiting the conclusion of the new rule proposal process. The hope at the time of the meeting was for a publication date sometime in early 2000, but if any problems are encountered in the proposal process this will be moved back to 2001.

Another useful source of information is the file in the LC database that has the G-schedule, including all the geographic cutter numbers. This file will be made available to libraries at some time in the future, but it has not yet been decided what form it will take. In the meantime, the Cataloging Distribution Service will be conducting a pilot project on using the web interface to access the LC database. Any libraries signing up to participate in this project will get access to the database before it becomes generally available. Those interested should contact Cheryl Cook at [cco@loc.gov](mailto:cco@loc.gov). (More information is available about both the revision of *Cartographic Materials* and the electronic G-schedule in the report in this column in the August issue of *base line*.)

Jo mentioned some other useful tools for new map catalogers:

*Understanding MARC Bibliographic: Machine-readable Cataloging*, written by Betty Furrie in

conjunction with the Data Base Development Dept. of the Follett Software Co. 1998. 5<sup>th</sup> ed. Washington, D.C.: Cataloging Distribution Service, Library of Congress, in collaboration with Follett Software Co. Available on Internet at: <http://lcweb.loc.gov/marc/umb/>

*Metadata Primer for Map Librarians*, by David Allen (compiling information provided by Mary Larsgaard, Pat McGlamery, and Jan Smits). Rev. 1999. [Chicago?]: Map and Geography Round Table, American Library Association. (Electronic publications series ; no. 3) Available on Internet at: [www.sunysb.edu/libmap/metadata.htm](http://www.sunysb.edu/libmap/metadata.htm) .

The latest edition of *Free-floating Subdivisions: An Alphabetical Index*, prepared by the Cataloging and Support Office (1999. 11<sup>th</sup> ed. Washington, D.C.: Library of Congress, Cataloging Distribution Service) was mentioned. It has separate columns for subfield v and subfield x. Also a document on the implementation of subfield v for genre terms was suggested. This file was apparently available at the University of Southern Mississippi home page at <http://www.lib.usm.edu/%Etechserv/cat/formsubv.htm#top> , but I couldn't find the document at the time of the writing of this report.

Another important resource will be the special issue of *Cataloging & Classification Quarterly*, on cataloging of cartographic materials, expected to be out in August or September. This will also be available as a separate monograph. Participants in the discussion group meeting who had written articles for the special issue of CCQ included Susan Moore, Jimmie Lundgren, and Scott McEathron. Jo passed out copies of titles and abstracts of the articles that will appear in this publication, which will be volume 27, no. 1-4. This journal issue should be available by the time my report appears, though my library has not received it as I write this. Another new source is an article written by Paige Andrew and Lucinda Hall on teaching map librarianship, soon to appear in *Catholic Library World*.

Maps-L, the map librarianship electronic discussion group, was mentioned as another very useful resource. While there are not a lot of cataloging questions on the list, there are a number of knowledgeable map catalogers who monitor the list and are willing to help with questions. The URL for the discussion list is [maps-l@listserv.uga.edu](mailto:maps-l@listserv.uga.edu). To subscribe, send the message SUBSCRIBE MAPS-L [your name] to [listserv@listserv.uga.edu](mailto:listserv@listserv.uga.edu).

OLAC (Online Audio-Visual Catalogers, Inc.) offers map cataloging workshops. The next one is scheduled for October 2000 in Seattle. Handouts are, or were, available on the OLAC website, but I was unable to find them. You can access the website and look for yourself if you like at [ublib.buffalo.edu/libraries/units/cts/olac/](http://ublib.buffalo.edu/libraries/units/cts/olac/) . Also, networks may set up workshops on special issues if they get enough requests. Recent ones have been given by SOLINET (taught by Susan Moore and Cathy Gerhardt), INCOLSA, etc. (See below for the highlights of the agenda from a PALINET workshop conducted by Paige Andrew.)

Basic geography textbooks may also be helpful. A nifty device called the map scale indicator, which allows the cataloger to "measure" the scale of a map, would also be useful. *Map Librarianship* (3rd edition) by Mary Larsgaard has contact information for Clifford Wood, the producer of this item.

It can be seen from the above that a lot of resources exist for the map cataloger and the trainer of map catalogers. Once the appropriate reference materials have been gathered, how does one go about training a new map cataloger? This was the next question that Jo asked the group. Once again, a number of suggestions were forthcoming.

Betsy Mangan mentioned several points that she covers when training new map catalogers. Titles, the use of a natural scale indicator, projections, and the G-schedule are emphasized. One discussion participant who trains copy catalogers starts by simply helping the new cataloger become familiar with maps then focuses on the fields that are unique to map records. Searching is important for copy catalogers, who may use variations of the title or corporate author/title searches.

Jo handed out a six page outline used by Johnnie Sutherland, the curator of maps at the University of Georgia, to orient new map catalogers to the world of maps. It begins with an introduction to the map room and goes on to discuss types of cartographic materials, the history of maps, the literature of cartographic materials, and the acquisition, classification, and cataloging of cartographic materials. The discussion of the library management of cartographic materials cites several chapters of *Map Librarianship* by Mary Larsgaard, *Map Appreciation* by Mark Monmonier and George A. Schnell, and *Elements of Cartography* by Arthur H. Robinson and Randall D. Sale. The bibliography includes these titles and several others.

Another approach to training map catalogers was presented in the form of an outline of a PALINET workshop presented by Paige Andrew. The cataloging training starts by asking "What is a map?" and discussing how bibliographic records for maps differ from book records, covers cataloging tools, then moves on to the discussion of specific fields. Particular emphasis is given to scale, projection, and coordinates. The section on physical description deals with such details as "when to use 'both sides, col.'" versus "back-to-back," and "measuring a map without a neat line or border." Call number construction is covered, as well as such fixed field dilemmas as when to use code "I" in the index element. After discussing subject analysis, Paige finished up with a question and answer session and (time permitting) by cataloging a single sheet map.

A number of points were brought up by discussion participants. The importance of extensive and timely revision was mentioned. In training a new cataloger it is important to take into account individual variations in learning style. Especially with one-on-one training sessions, it is very useful to tailor the training to the person being trained. Thoughtful answers should be provided as to why things are done a certain way. Give the new cataloger something to catalog

as soon as possible, to give the person a feeling of accomplishment. Before beginning map cataloging training the person should already have been trained in the operation of the local system and general workflow. Start with the easiest material, moving on to more difficult items only after those being trained have mastered the easy material. In response to a question regarding whether the new cataloger would be using workforms or cataloging online, most responded online. What level of cataloging do paraprofessionals do? Some do original cataloging.

Recent developments on OCLC may facilitate the review process in training; a save macro is now available to help prevent saved records from expiring after the fourteen day time limit. Another option is to use CatME to avoid save management problems.

The question was asked whether a map cataloging project would be appropriate for a practicum student. Lucinda Hall replied that she had done a map cataloging internship with Dorothy McGarry. Having already completed an advanced cataloging course would be helpful in this situation.

What about training failures? If one-on-one training doesn't seem to be working, you may want to try a more formal training environment, according to Betsy Mangan. At G&M they feel that it takes two years to become a competent map cataloger. One final suggestion is that new catalogers can get signed up for NACO/BIBCO training.

The issue of training of map catalogers is certainly one that generated a lot of interest. This was a very informative session, with lively discussion and several very helpful and informative handouts provided by the chair. Training is always a challenging activity, and training of map catalogers is especially difficult, as maps are simply not as familiar to most people as books are, and they have characteristics which make their description difficult. Those who attended the discussion group were able to carry home much useful information and advice about this difficult issue.

—*Mark Crotteau*

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# **CARTOGRAPHIC USERS ADVISORY COUNCIL (CUAC)**

**May 7, 1999, 9:00 a.m.**

## **GOVERNMENT PRINTING OFFICE (GPO)**

### **Robin Haun-Mohamed**

Our first speaker was Robin Haun-Mohamed, Chief of the Depository Administration Branch of GPO Library Program Service (LPS), who set the stage for CUAC's primary mission of getting maps and cartographic and spatial data into the depository program. Robin began with a synopsis of the Federal Depository Library Program (FDLP). Depository libraries date back to the formation of the Government Printing Office in 1895. There are 1350 depository libraries in the United States, and 50 of those libraries are Regional libraries that are mandated to receive all material distributed by the FDLP and keep it in perpetuity. The other libraries are selective in nature. They have the opportunity to select the items they wish to receive for the year, and they may deselect at any time. After material is 5 years old or older, they may discard this material by sending lists of these items through their Regional libraries. All depository libraries must be open to the public and provide free access to all government data. All government information must be processed and made accessible on whatever catalog or access tools the library provides.

Products distributed by the Depository Program include paper, microfiche, and tangible electronic formats. Dissemination to libraries in an online-only format has now also begun for some information products. The maps in the program include those from USGS, BLM, Forest Service, National Park Service, NOAA, FEMA, and NIMA.

The services that the Program offers to federal agencies include paying for the distribution of the products through a very efficient distribution system. They can provide a list of libraries that receive agency products so that an agency can know who the likely users of their products are. GPO catalogs the products using the OCLC network. Long term access for users and for agency use is assured. The FDLP sponsors programs that include opportunities for federal agencies to speak to the librarians in attendance. When printing is done by GPO, printing of publications for the Depository Program comes out of the GPO budget and not the agency budget. When printing is obtained by the agency outside GPO, then printing of copies for the depository program must be paid for by the agency.

Robin talked about GPO's mandate under Title 44 of the U.S. Code that states that all government, publicly funded publications will be made available to GPO for the distribution to libraries in the FDLP. Exceptions are publications that are for internal use only or documents

that are classified.

Their biggest challenge is cooperative publications that depend upon sales for cost-recovery. These are publications that are done with endowment funds, private funds, and/or agreement with a second or third party. Although these are more of a challenge to obtain for the FDLP, GPO still will ask for them. Robin explained the technicalities of how orders are ridden from regional offices, like the Denver Regional Printing Office, and how the cost to the agency works for different types of print orders. Fugitive documents—those that escape the distribution program—remain a constant challenge. The Library Program Service has a position devoted to contacting agencies to try to get an appropriate number of copies. If sufficient paper copies cannot be obtained, an order for fiche copies is made. This process is paid for by GPO.

Online-only products are new for them. In the electronic environment they refer to dissemination instead of distribution. For these products they ask the following questions: Does it fit the scope of the program, and does it look like it will be around long enough to make a permanent record for it? If so, they catalog the product and send information to the depository libraries via the online U.S. Government Publications Catalog or via some other locator service, such as the *Browse Electronic Titles*, which is an agency listing and then a list by title. The URL is put into the cataloging record.

To deal with constantly changing addresses on the Web for the online-only products they disseminate, they use the Persistent Uniform Resource Locator (PURL) which is software provided through OCLC that will allow an address to be found on the Web even if it changes from what it originally was when the record was created. They also still put in URLs. This project is about two years old now and is still in a developmental stage. Robin made this plea to the agencies: When a change is made to an agency Web site, please notify GPO so appropriate changes can be made to the links to the site in the record. If a site or data at the site is being given up, GPO especially wants to be informed so that the material can perhaps continue to be made accessible through the GPO server or through a partnership with a depository library.

GPO and the FDLP serves at the direction of Congress. The FDLP's budget is around \$30 million, under the Superintendent of Documents, who also directs the sales program. There are around 150 people employed in this part of GPO.

Robin next addressed specific concerns with the distribution of depository map products. There are ongoing problems with the distribution of NIMA products. Previously NIMA maps were distributed directly from the agency, just as USGS maps are. About a year ago, the distribution responsibility was given to the Defense Logistics Agency, and there have been problems ever since. There have been no changes to the selection profiles for the last six years, and there are other problems as well. GPO now has brought the distribution of NIMA maps back into GPO. But now GPO is still having problems with getting accurate numbers of

maps from NIMA. Most are arriving with insufficient copies to ship. They are still in negotiation with them to resolve the problems. Shipping lists will be separate for these maps, and they will be dropped into the depository boxes or a separate mailing to separate housing sites.

## **USGS**

Robin and others from GPO have been working with USGS for the past couple of days on their distribution process, and updating this process. Through a new memorandum of understanding, shipping (or sending) lists for USGS maps will now come in depository boxes, or separately for separate housing sites.

The National Wetlands Inventory Maps have begun to arrive from NARA in Seattle where they are being produced. They are much improved, beautiful fiche. We probably have lots of duplicates, because some of them were very poorly filmed and many were redone. We just need to make sure that we have one complete set and treat others as duplicates. There is a problem with the new set from Seattle, however, and that is what is holding them up. They were filmed six to a set even if there were not enough to fill that many fiche, so there are lots of blank fiche. Robin will need to reformat them before she has all of the copies made for the libraries. The 1<sup>st</sup> generation silver master runs about \$8/fiche and goes to NARA as part of the GPO collection every four years, while 2<sup>nd</sup> generation silver is used to reproduce from and then it goes to LC. If GPO needs it later, it can go to LC to get it. The diazos, which are what the depository copies are, cost just 6 - 10 cents each. Originals go to cataloging, but after they are cataloged they are boxed up and go on to NARA and LC.

## **NOAA**

Print-on-demand of nautical charts was announced last year. The nautical charts are being printed under a CRADA, which frequently means cost recovery and that the product will fall outside the program. NOAA did offer to send one copy of each chart to GPO, however. GPO negotiated for just one chart a year out of the six that were being produced. These they will distribute to libraries. If a library needs the charts more often GPO would facilitate that arrangement with NOAA.

## **National Atlas**

This is a CRADA product and is available on the Web. There are three map sheets that have gone to the depositories that are part of the Atlas and these have been cataloged and are in OCLC.

## **Census**

There is a new release of the TIGER line files. These should be in our libraries very soon.

## **New Products**

There are two new products. GAP analysis data CD-ROMs and the RMP Submits. Depository libraries are being surveyed regarding these products. All libraries must respond, including Regionals. The USGS Biological Resources Division Gap Analysis Program (GAP) is the primary Federal program for mapping and assessing the status of biodiversity in the U.S. Data for each state will appear on 1 to 4 CDs depending on the size of the state and data complexity. The viewing software for the GAP Analysis data is on disc 1 only, which is the California disc. Anyone wanting to select their own state only should remember to also select the California disc in order to get the software.

Risk Management Program requires that chemical plants, power plants and all industrial facilities that are required to submit information to EPA submit a Risk Management Plan (RMP). RMP Submit is an EPA software package for facilities to use in submitting Risk Management Plans. This has been prepared under Congressional direction. The Plans were suppose to be a Web product. However, a senator became concerned about putting this type information on the Web, especially with the danger of nuclear and/or terrorist attack, and stopped the plan for putting it on the Web. The part of the data that will not be on the Web is call the Offsite Cost Analysis, or OCA data. GPO is still hoping to get some of the data, minus the sensitive stuff. It is not certain at this point whether this information will become available. What is currently available and being surveyed for is a CD-ROM product that will require the depository library to store the software and information from the user on their hard drive until the plan is copied. This is the reason that a survey is necessary.

## **Questions**

Robin then posed some questions for CUAC. She has asked that we address these issues before the end of our meeting.

What is the role of physical maps in depository map libraries, especially in light of the transition to electronic data?

What is the role of shipping lists? Is there a possibility that GPO could go to a shipping list posting on the web?

What is the role of the availability records in the cataloging of maps? The availability records are the ones which identify the different editions of maps.

What is the trend between GIS collections and the paper map collection? What is the interrelation between the two? Are they existing together or separately? What impact do we see on the program?

## **FOREST SERVICE**

### **Steve Gregonis**

Our next speaker was Steve Gregonis, the Region II GIS Coordinator for the National Forest Service (NFS). The main points of his discussion were data dissemination and archiving data. Over the last few years, NFS has set priorities on assembling a GIS base for use in planning. This data, in turn, is made available for analysis. They are having a problem with standards—roads, vegetation, etc. Other problems are occurring with the texture of the data—how detailed the data is. Steve's group is attempting to raise their level of service so that it can be offered to NFS and the individual National Forests. For example, NFS is using GIS extensively in compiling each National Forest's 5-year Service Plan. GIS is speeding the updating of those documents. The 5-year plans are public documents that come through the Depository Program.

Most of digitizing for the base maps and many of the layers for Region II have been completed. The problem arises in archiving the data—whether it be in paper or digital format. As NFS tries to archive the data, they are having problems finding out where the data originated. In order to correct this, NFS is attempting to attach metadata to each data set using the Federal Geographic Data Committee standards. But the task of adding metadata is daunting. Currently, Steve's Region has thousands of sets of data, but only a few have metadata.

The data is being made available. Several of the Service Plans will soon be released on CD-ROM. However, most of the data sets are only available through the agency that compiled it. In response to this, the Region is attempting to put together a library of regional data. NFS is working in cooperation with local authorities, including state and local governments, to establish data clearinghouses. On a national level, NFS is attempting to standardize their data so that information can be shared. They have set up three modules (infrastructure, vegetation, water), and hope the data will be able to fit into these categories. The project is very big and will take time to be completed.

Archiving GIS data has caused many problems for NFS. One of the biggest is that GIS data can change without notice. Steve explained that in the GIS field, most expect this. Currently, the whole way of archiving data is somewhat informal, but because of some recent Freedom of Information inquiries, that is becoming more formal. Steve pointed out that there is a big difference between archiving a map and archiving data.

## **FOREST SERVICE**

### **Dave Wolf**

Dave Wolf, Forest Service Geometrics Group Leader for the Rocky Mountain Region (Region 2), continued the discussion. He stressed that hard copy maps would still be available because that is the way the public wants them. In addition to the print, we will begin to see more products in electronic form, CDs, and on the Web. Mr. Wolf asked if libraries wanted print and electronic products, to which we answered yes.

The updating universe has changed. Where traditionally printed updates to maps were produced on a cyclic basis, electronic databases are under continuous revision. The question is when to produce a printed update. The Forest Service is partnering with USGS to produce updates of the quad maps for forest lands and visitor maps. Production of these updates is progressing.

Mr. Wolf decried the lack of national coordination in the Forest Service to handle production and distribution questions. No standards are being adopted concerning new base map features identified in electronic products. What products will be produced, what will be archived, and will it be free? He gave the example of the National Forest maps that are produced on funds from sales receipts. The data used to produce the maps is integral to the mission of the agency but the printed product is not. Does that meet the criteria for inclusion in the depository system?

Mr. Wolf left us much insightful information on the mapping efforts and practices of the Forest Service and many questions federal agencies producing maps and map librarians need to contemplate and answer.

## **BUREAU OF RECLAMATION**

### **Dave Eckhart (for Mike Pucherelli)**

Dave Eckhart works with the Remote Sensing and Geographic Information Group of the Bureau of Reclamation (BOR) at the Denver Federal Center. This Group builds spatial databases for Bureau and for other agencies. The data comes from several sources:

1. paper maps;
2. models (for instance, there is a current project relating to modeling dam failure which uses DEM and TIGER data); and
3. remotely sensed data (this is the source of the bulk of their data).

Examples of some of the remotely sensed source data that BOR uses include: conventional and digital aerial photography; LIDAR for high resolution DEM data; AVIRIS from NASA; AVHRR meteorological satellite data; Landsat data (used mostly for crop imaging); data from

the French SPOT satellite and from Indian satellites; radar data; and airborne video (mostly for river information).

Much of the work the Group does relates to crop mapping, using high resolution data to define boundaries and low resolution (Landsat) data to determine what's growing on the land. Also, they're involved with a lot of water quality mapping for large reservoirs.

Regarding the archiving of their data sets, metadata is part of final output. The Principal Investigator for a project is responsible for making sure the metadata is completed and that it meets Federal Geographic Data Committee (FGDC) standards. The metadata is made available on a Bureau server. The user must browse by project names—the metadata on the server is not searchable by keyword. Most of the digital data, however, are not available except by contacting the person listed in metadata. The Remote Sensing and Geographic Information Group does keep a digital copy of the data in its office, but the original is sent to the client. In general, final products from projects are not accessible except from the client, and it will probably have been updated from the time it was delivered to them by the Bureau's Remote Sensing and Geographic Information Group.

In the next few months over one hundred clearinghouse servers containing metadata will become searchable from FGDC Clearinghouse home page. These nodes will be hosted by many agencies dealing with spatial data, such as the BOR and the USGS. Due the vast size of the data, however, actual data will probably not be online any time in the near future.

## **BUREAU OF RECLAMATION**

### **Debbie Fugal**

Debbie Fugal, Records Manager at the Bureau of Reclamation, provided a brief overview of her operations. All government agencies are required to create records related to the work of the agency. The creator of each record determines whether the record is permanent or temporary. Permanent records belong to the National Archives, which requires submission of records in paper, not electronic, format. The permanent record cutoff is the end of each calendar year. The records are transferred to the Federal Record Center 10 years after the cutoff. The FRC then transfers the records to Archives 30 years after the cutoff.

With the increased use of various electronic formats, submission of Bureau of Reclamation records to the National Archives has been at a standstill. GRS 20 (General Records Schedule, National Archives) will enable agencies to schedule electronic records by February 2000. If an agency's electronic database is certified by DOD, Archives will approve records management in electronic format and transfer custodial responsibility of the electronic records to the agency. The Bureau of Reclamation will be using RIMS, which is one of the three databases approved by DOD. The other two are TRIM and FOREMOST.

Each agency will be responsible for maintaining their records in an electronic format that is continually accessible. It is the intention of the Bureau of Reclamation to migrate permanent electronic records, including e-mail and web site information, as necessary to maintain accessibility.

## **NATIONAL PARK SERVICE INTERMOUNTAIN SUPPORT OFFICE**

### **Brian Carlson, GIS Specialist**

The Intermountain Region is comprised of 84 National Parks and Monuments. The GIS Program Office in Lakewood, CO, provides technical assistance to those units in providing GIS development, with GIS issues and needs, and with support to the units. Offices are located in Denver and Albuquerque and are staffed with six permanent employees, three temporary employees, and six students. Two cooperative agreements exist: the first with the University of New Mexico Albuquerque and the second with the University of Denver. Three students from each institution gain experience with their work at NPS and with GIS.

Of the 84 Park Service units, 63 units utilize some level of GIS. Sixteen are staffed with full-time GIS personnel. ArcView3.1 (ESRI) is the standard software used, and ARC/INFO is used at 16 park units.

During Fiscal Year 1998, \$90,000 was provided to distribute to the 84 units in the Intermountain Region. Funding was used to support a GIS meeting on a biannual basis, hardware, software, and training salaries.

During Fiscal Year 1999, \$88,000 was provided to distribute and 47 proposals were submitted with 10 proposals chosen for funding. In addition, \$15,500 was set aside for metadata training.

During Fiscal Year 2000, \$88,000 will be available. A call for proposals and review is underway. Funds have been set aside for an Intermountain GIS conference and a metadata initiative involving training. Additional funding sources are also being pursued.

Forty-eight requests for GIS technical assistance have been received, some similar to earlier project proposals. They have involved data searches and assessments, global positioning system (GPS) data collection, scanning, digitizing, metadata, data conversion, and General Management Plan support. The General Management Plans operate on a 10-15 year cycle.

Specific projects have included: a cultural landscape inventory at Golden Spike NHS utilizing GPS to locate features; an ethnographic overview of Capitol Reef National Park; a wetlands assessment of Great Sand Dunes NM; National Historical Trails Mapping; a geological map of Fossil Butte NM; and a bighorn sheep habitat suitability analysis of Mesa Verde National Park.

The Intermountain Region of the NPS has embraced metadata and the development of standards as required by Executive Order 12906. The NPS has developed metadata collection guidelines and are in federal agency compliance.

Within the Intermountain Region, as of August 1998, 25 datasets were online, compliant and searchable. As of May 1999, 220 datasets are available online. Software evaluations have been completed, and training for GIS professionals is being provided. The Intermountain Region of NPS has provided three classes and trained approximately 30 people in metadata collection utilizing "metamaker."

They are currently trying to streamline the process by customizing to make "metamaker" easier to use. Projects involve inventory of data themes, identify and prioritize data, determine proprietary versus non-proprietary data, participate in the Colorado Ecosystem Project (which is a metadata library project), and develop an implementation plan for the 84 parks in the eight states. They are providing assistance for the parks and writing grants to help take care of metadata backlog.

Additional information may be obtained through the internet. The National NPS GIS Programs web address is [www.nps.gov/gis](http://www.nps.gov/gis) and the Intermountain GIS Program web address is <http://129.24.219.65/gis/intro.htm>.

A question and answer session followed and provided additional information.

\* Regarding digital information: the Intermountain Regional Office maintains a core set of dataset themes while the individual park unit may contain the core and more.

\* Regarding other regions having university cooperative programs:

Intermountain and Alaska regions are the two largest, with the Intermountain responsible for more parks than any other region. The cooperative program has existed 12 years, with Albuquerque having the longer coop agreement. The University of Denver program just started that last October.

\* Recently, a map showing congressional districts and parks in the region has been completed for the Intermountain Region Office.

\* The Office is developing digital line graphs (DLGs) for parks, and are working with other agencies.

\* The Office is working with ESRI on vegetation of parks—very detailed—and developing interim publications.

\* Through the FGDC the Intermountain Region data are available via the Internet are searchable. All files are in e00 format.

## **COLORADO FEDERAL GIS USERS GROUP**

### **Brian Carlstrom**

Brian Carlstrom, GIS Specialist with the National Park Service Intermountain Support Office, gave a brief overview of the Colorado Federal GIS Users Group which meets periodically to share information on projects that are underway. The meetings are open to any federal agency involved with GIS. Participants include the Bureau of Land Management, Bureau of Reclamation, Federal Emergency Management Agency, Bureau of the Census, and the National Park Service. Ingrid Landgraf is the point person for the Users Group, which has been meeting for about 2<sup>o</sup> years. Members of the Users Group share information on an FTP server maintained by the National Park Service.

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## **U.S. GEOLOGICAL SURVEY**

### **Craig Skalet, Chief of the Information Services Branch**

In his presentation, Craig Skalet gave a brief, general overview of what USGS is and described some of the changes that have occurred in the Agency. He discussed the National Mapping Program and its products. He put special emphasis on the Rocky Mountain Mapping Center and its efforts to improve the promotion and delivery of map products. He also provided a historical view and update of the Landsat Earth Remote Sensing Satellite Program.

### **USGS Overview**

The USGS has undergone a number of changes under the leadership of its recent directors: Dr. Gordon Eaton and Charles Groat. During this time there has been a general realization at the top that earth science problems must be attacked in an integrated fashion. Until this time, there existed four independent divisions: National Mapping, Geologic, Water Resources, and Biological Resources (which came into existence about 2 years ago). The goal recently has been to reorganize USGS with linkages at the bureau level programs, which previously had operated separately. Integrated science and interdisciplinary science goals were to become and continue to be the priority at USGS. Emphasis now has to be placed on a culture which focuses on integrating science and interdisciplinary science goals and which embraces the concept of integration and teamwork across the divisions.

To promote this concept, Dr. Eaton instituted the formation of councils: Science, Operation, Information, and Human Resources. The Science Council brings together and deals with the programmatic issues of the bureau. The Operation Council, where interdisciplinary teams are formed, works to integrate all information on a particular subject "in one place, in the same reference system and easily accessible." The result is that during the last five years USGS has made great strides in this new direction. In addition, USGS has tried to become more connected with its customers and other agencies (Dept. of Interior and Land Management agencies). Also, there is a focus on the need for cooperative agreements with other agencies. In fact, in several places across the country, interdisciplinary teams have been formed to do base studies. The Information Council deals with the information infrastructure, seeking to provide a mechanism for consistent communication and to facilitate that communication across the Bureaus. Projects such as the Ohio National Atlas and the Gateway to the Earth are examples of what can be accomplished in this new integrated environment across the divisions. The main goal is to provide information on the Internet in a cohesive manner—that is, where the customer can get to a list of all types of information (hazards, water quality assessment, the basic data sources, the basic cartographic data) about a particular piece of territory.

In spite of the issues and concerns that come with an attempt to bring four very different divisions of the USGS together with their separate funding, USGS will continue to create an environment conducive to integrated science, cooperative efforts, and interdisciplinary science goals. More programs that focus on end-user partnerships and partnering with the private sector also can be expected.

### **National Mapping Program Division (NMP)**

The division has five operational centers with the overall mission "to ensure that the nation's needs for fundamental geo-spatial data and information are met." This division is broken up into three main problematic areas: production, research, and earth science management and delivery. The five operational centers are located across the country: (1) Western Mapping Center- working in the digital ortho-photo area; (2) the Rocky Mountain Mapping Center a production and distribution center for traditional products; (3) Mid-Continent Mapping Center a production center; (4) EROS Data Center—working in satellite imagery area and remote sensing; (5) Headquarters and Mapping Applications Center—provides the civilian and federal community access to classified material, and also serves as the headquarters for the USGS. Programs address the areas of mapping data collection and integration, earth science information management and delivery and geographic research and applications.

Of the three programs, Earth Science management and delivery is the main focus of the Rocky Mountain Mapping branch and operation, of which Craig Skalet is chief. This center is involved in the area of managing scientific data and delivering it to the customers—whether delivery is by the Internet, by the business partners network, or clearinghouses. The programmatic scope of this program includes six main areas: outreach, information dissemination network,

information management system, archive, distribution and inventory management, and reproduction and replication. Outreach encompasses press releases, the K-12 educational programs, conference attendance, trade shows, and legislative education. The information dissemination network is the nine earth science information centers. Information management centers are any of the software networks that make up the systems that helps do the job of information dissemination. The archive for the programmatic data is called the operational database. Distribution and inventory management is the maintenance and retrieval of map products from the warehouse to the appropriate customers. Reproduction and replication is use of the photo lab and doing the "as is" and minor revisions processes.

The discussion of the graphics program—the paper map products—looked briefly at some of the following areas: at the increased use of alternate and varied "best available" sources, the current views on restructuring the maintenance of the graphics, the proposals to focus on the best selling maps and funded partnerships and the place-based programs liaisons. A lengthy discussion followed on the topic of the distribution, revision, and current status of updating the map products.

In the area of distribution, the emphasis is on the customer and enhancing services provided to them and the maintenance support for these products. Progress has been made in delivery of products in that the turnaround time is about 4-5 days for map orders. To date, the business partners are subsidizing the retail customers. The price of a map ordered from USGS today is \$4.00; the operation is not profitable. USGS does not wish to continue the present level of retailing in the area of map product.

The current process of map distribution is being looked at so that it can be revamped. USGS would prefer to be more of a wholesaler in this area than a retailer, thus not competing with their business partners (retailers) for sales. Maps sold now at \$4.00 actually cost the agency \$23.00, which covers receiving orders, pulling, preparing for shipment and distributing. The business partners now subsidize the retail customers. In the future, USGS would like to bulk distribute to business partners, give them a discount, and have them set the price for sale to the public.

The development of the web catalog is one effort to encourage and increase the use of business partners, by providing them with a tool to promote some of the most popular products to customers. The goal would be to have the business partners handle most of the retail orders. The catalog is now in the very early stages, but a demonstration was given. The catalog will probably consist of the thirty best sellers. It would allow the customers to see a list of maps, what the map looks like in some shape or form, where the map dealer is within the vicinity of the customer. Input from the business partners is being sought over the next two months in the development of the catalog; in September 1999 the catalog should be ready for testing.

## Map Products

Craig began this discussion by stating that the issues and concerns of the graphics program—mapping information and its production—are being addressed. The huge amount of funds which have been invested in these 56,000 map products was noted as well as the need to insure that this investment is valued as a national asset that should be continued. Each topographical map cost about \$40,000 - 50,000 and there are 56,000. In discussing the sales history, it was pointed out that annually 2.7 million maps are sold, bringing in about 5.6 million dollars. Then about one-half million maps are distributed free. Sales are decreasing and the agency is not doing a great job in maintaining the quality and accuracy of the 1:24,000 topos. Monies allocated for graphics products have become less and less during the last twenty years due to the addition of new and important products like the DOQ, DEM and others. But the biggest promotional item of USGS is its 1:24,000 topographic maps because they are what the public associates most with the USGS agency. Thus, to insure that this national asset continues will require the division to re-structure the production, revision, and maintenance associated with these paper products.

At present, funding is needed to do map revisions. This will probably involve looking at recovering some of the cost from sales price, and there is also a push for funding initiatives to address new monies from Congress to deal with it. Money that is collected for sales can go back into the distribution and sales operation of these maps, but monies which are collected can not be used to do actual revisions of the maps, which would cost about five to six dollars. Some feel that at least the reprint process should be recoverable. The reprint process cost about a quarter a map and the minor revision process costs about seventy-five cents a map. All revisions would involve about 2,000-2,500 maps per year. 15 million dollars annually would be needed to do all revisions. But at this time, appropriated funds can not be used to pay for map revisions and monies collected from sales can not go back into the revision.

Currently, USGS and the Forest Service are doing map revisions, with the Forest Service doing about 600-700 and the USGS about 800-900. This cooperative arrangement with the Forest Service should take care of updating about 10%. The goal in the map maintenance area is to have a topographic maintenance strategy in place by 2000 that will increase map revisions by a factor of three from the FY 1996 level—from 300 to 400 a year to 1,000. The strategy is to look at all maps and build a five-tier classification for maps which will determine their cycle of revision based on sales statistics. There would be about 1,000 maps at the top tier—those where at least 15 are sold each month. Revision for these will be on a 5-7 year revision cycle. The next level (level 2) might be on an 8 year cycle; level 3 might be on a ten year cycle; and level 5 would be those maps where 0-1 per month are sold, and that is a large percentage of the total. There would also be a similar tier to establish the type of revision done—minor, or basic revisions, or "as is."

Others factors concerning the maps are also being looked at: Where are the maps that are being sold in higher rates? Where are the mapping priorities for the country? Why would the

consumer buy a new map?

Currently topographic maps will continue to be distributed in paper format and the cooperative program with the Forest Service will take care of about ten percent of the revisions. The strategy at USGS will be focus on revision of the maps, which are high selling—about 1,000 with the overall strategy is to update the topographic maps.

Other topics discussed: (1) There is some talk occurring about reprinting the 100-150 of the high selling 15-minute quads, and (2) one more Topographic Users Conference is planned. Information gathered from the two topographic users conferences (held in Reston/D.C. area and Denver) were useful in redirecting and planning the USGS programs.

## **NMP Array of Products**

Attendees were also given a packet, which described the array of products offered through the National Mapping Program. Databases and products mentioned or discussed were:

1. The National Hydrography Database (NHD), which is a cooperative venture with EPA and the Water Resource Division of USGS and derived from hydro digital land graphs and EPA RF 3 data.
2. The National Elevation Database (NED) derived from the digital elevation models (DEM).
3. The digital orthophoto quad (DOQ) and the digital elevation models (DEM). Completion time frame for national coverage is 1-2 years.
4. The digital raster graphics (DRG) and the digital line graphs (DLG). Provision of access to this data will be through an arrangement/agreement with Microsoft and the TerraServer. This would provide a mechanism for direct feed-in. This data can already be looked at and obtained through the EROS Data Center.

It is expected that there would be a fee for the cost of distribution, even though this information would be available online only. The DLG would be used to identify and replace changed information.

5. Satellite Imagery product lines—the main line satellite offerings of earth observation for the last three decades:

- a) Declassified Intelligence Photos (1960-1972)
- b) Landsat Multispectral Scanner (1972-1992)

c) Landsat thematic Mapper (1982-1996)

d) AVHRR LAC/HRPT (1986-1996)

e) Landsat 7 (1999- )

## **Landsat 7\***

The program started as a USGS initiative in 1966—the idea for the mission coming from USGS scientists who recognized the successful use of remote sensing technology in previous manned space missions. A number of agencies have been involved since the inception of the program. The agreement was for NASA to build, launch, and operate the satellite, while USGS would receive, archive, process, and distribute the resulting products. EROS Data Centers would handle the data products, and international ground stations would handle the products for local applications. During this period the Department of Agriculture and the Department of Commerce joined effort to develop this program. In 1972, NASA launched the first satellite (ERTS 1 or Landsat 1). In 1975, NASA changed the name of the program from ERTS to Landsat. In 1979 after the launch of Landsat 3, efforts to commercialize the program began. The Landsat operations were to be transferred from NASA to NOAA. The goal was to transfer Landsat to the private sector. In 1984, a contract was signed with NOAA to commercialize the Landsat system. Then in 1985, the commercial operator (EOSAT, a partnership of Hughes and RCA) was named to operate the system under a ten-year contract.

EOSAT:

- operates Landsat 4 and 5
- will build two new spacecrafts (Landsat 6 and 7)
- has exclusive rights to market Landsat data collected prior to date of contract (9/27/85) until expiration date (7/16/94)
- has exclusive right to market data collected after 9/27/85 for ten years from date of acquisition
- will receive all foreign ground station fees

USGS to provide funding for spacecraft development over five years.

In 1988, EOSAT's contract with NOAA was re-negotiated to incorporate changes requested by Congress and EOSAT. In 1989, NOAA funds for the Landsat operations were exhausted, and

EOSAT was directed to turn off satellites. This was the beginning of funding problems and interim solutions, which lasted through 1992. During 1992, the National Space Policy Directive #5 outlined a strategy to ensure the operations of Landsat missions 4 and 5 and to prepare for the launch of Landsat 6. DOC (Department of Commerce) was instructed to ensure the operation of Landsat 4 and 5 until Landsat 6 was launched and operational. DoD (Department of Defense) and NASA were instructed to develop and launch Landsat 7 and define the continuity requirements after Landsat 7. A management plan for the Landsat program was developed, which assigned responsibility for the space segment to DoD and the ground segment to NASA. DoD signed a contract with General Electric to construct and launch Landsat 7. In 1993, Landsat 6 was launched. With the loss of Landsat 6, international confidence in the program was damaged, and this increased the probability of the loss of data continuity. In 1994, NASA, DoD, and NOAA worked to develop a successful implementation and strategy for the program. Later that year, NASA, NOAA, and USGS meet about Landsat ground system and signed a "Management Plan for the Landsat Program," which described the program objectives and the agency responsibilities. In 1999, Landsat 7 was launched. There is no plan for Landsat 8. USGS has stepped in to take over the ground operations.

Today, Landsat 7 is a USGS/NASA operation. Together, the agencies will work on executing assessments of user requirements and what is next after Landsat 7. It is anticipated that any future ventures will be a USGS/NASA effort. USGS has taken two to three million dollars out of the production budget to support Landsat 7. A technical working group has been formed, and USGS has some responsibility for the data management and the ground stations operation. There are production rates of 250 scenes per day, 140 coming into the EROS Data Center, 40 going to Alaska, and 70 going to Norway. The plan is to produce and distribute the user's product at the cost of reproduction. That accounts for why the price is where it is. USGS will assume full responsibility for the Landsat 7 operations in 2001.

EROS Data Center will be pricing the data. Pricing today: \$475 a scene for the level zero, which is raw data not analyzed or manipulated. If you go up to 1R and 1G, it's \$600 a scene. They have not set a price on the next level of data. The turnaround time for delivery also affects pricing: when raw data comes in it can probably come out the next day. But if it's got to be manipulated, it takes another day, and level 1P takes three days. All Landsat data is copyright free. The pricing history of the Landsat data was that if it was ten years or older the cost was \$450 per scene. Otherwise, it was \$4,500 per scene and not many products were sold until they were ten years old. The sales history of Landsat data is being reviewed and in the future, the older data will have varied pricing based on a mixed scale variable. Since the government will own the data, the pricing will be more reasonable.

Digital data will not be distributed free to libraries. One idea is to distribute the data with some kind of subscription service charges. Regional consortia being formed such as the one in California, another in the Northern Plains (the Dakotas, Kansas, and Wyoming) and another in Virginia were mentioned as possible sites to pipe Landsat data and other digital products. This idea is being investigated, and the problem to be dealt with is how to price the data.

In general, the National Mapping Program has to continue to focus on its data and information maintenance. It must provide a national approach for availability and access to this data. It must play a robust cooperater role in seeing that standards are defined and also establishing boundaries for database quality and content.

## **Issues Raised with Questions During and After the Presentation**

Q: What was GPR?

A: Government Performance Results Act.

Q: GNIS - Why is getting connected to the Web site a problem?

A: The Agency had not expected the popularity of the web service and had not anticipated such high usage. The web site will be going to a distributed cluster configuration of several platforms using a Sun server with the design moving on an upgraded oracle base to correct the access problem. The new design will be completed within a two-month time frame. (It was also noted that the data did exist on a CD and that the 1998 CD used a DOS-based software).

Q: Where are you on updating of those best selling maps?

A: Our plan is to focus on the high selling 1,000.

Q: Can you not make the argument that you could maintain the updating by recovering cost from the sale price, if you don't get other funds?

A: Yes, that's a piece of it, too, because I am arguing that let's make that \$15 million, \$12 million, and I will take the "as is" parts and minor revision parts, change the pricing of the maps, and try to market maps better, to get more map sales and cover that price.

Q: Are you going to hold a third topographic users conference like the one held here (Denver) about a year and a half ago? (One was also held in Reston/D.C. area). What became of the results from those conferences?

A: Mark took that information and fed it into the program plan. I didn't actually participate in that, but my assumption is that the info was applied to standards, changes or modification, program redirection, those sorts of things. I think a third one is planned.

**Dealers that offer overnight map delivery are:**

## Map Link

30 S. La Patera Ln, Unit #5  
Santa Barbara, CA 93117  
(805) 692-6777

Omni Resources Inc.  
1004 S. Mebane St.  
Burlington, NC 27216  
(336) 227-8300

Allied Services  
966 N. Main St.  
Orange, CA 92867  
(714) 532-4337

Timely Discount Topos Inc.  
9769 W. 119<sup>th</sup> Dr., Ste. 12  
Broomfield, CO 80020  
(303) 469-8488

Powers Elevation  
13900 E. Harvard Ave.  
Aurora, CO 80044  
(303) 321 2217

Map Express/Speedy Topo  
441 Wadsworth Blvd., Ste. 124  
Lakewood, CO 80226  
(303) 274-4440

Carolina Global Maps, Inc.  
PO Box 5012  
Greenville, NC 27835  
(800) 248-6227

Quick Maps Co.  
PO Box 150123  
Lakewood, CO 80215  
(303) 238-5427

Fast Maps  
PO Box 260879

Lakewood, CO 80226  
(800) 426-8676

## **NOAA**

### **Dan Seldin for Fred Anderson**

Fred Anderson was not able to attend this year's meeting in Denver. Dan Seldin, NOAA liaison, interviewed Mr. Anderson via phone before our meeting, and submits the following report:

#### **New Products:**

There were no specifics on new aeronautical products, but if new Terminal Area Charts or Helicopter Charts are released, they will automatically go into the depository program.

New NOAA/NIMA catalogs have recently been produced and should have been sent to depository libraries.

#### **Transfer Of Department Of Transportation:**

Aeronautical Charting will stay with NOAA for the rest of the fiscal year.

FAA must be re-authorized by the end of May. It is normally re-authorized at the beginning of the fiscal year, but problems with Aeronautical Charting caused Congress to re-authorize for only 6 months at the beginning of the fiscal year. When the problems were not solved at the end of 6 months, the authorization was extended 2 more months. Secretary Slater is working with the Senate. The FAA and DOT want Aeronautical Charting in TASC, but 2 major interest groups, Aircraft Owners and Pilots Association (AOPA) and National Business Aviation Association (NBAA), want it in the FAA. They are afraid that a fee for service organization like TASC will raise prices. Jane Garvey, the FAA Administrator, does not want AC&C as part of the FAA.

With all the disagreements, no one knows where Aeronautical Charting will go; it could even stay in NOAA.

#### **Nautical Charts—Print On Demand:**

The nautical charts are produced by the NOAA Office of the Coast Survey. They are proposing that the printing of the nautical charts be done by a contractor, using a large format raster plotter on electronic request from the public or chart agents under a CRADA. 3M Company has

been selected as the contractor, with a subcontractor named Voemela in St. Paul, MN to do the actual printing and distributing. If this plan is adopted, these might not be government products that would be in the depository program. Fred Anderson spoke to the Director of the Coast Survey, who said that it has not been decided whether the nautical charts would be CRADA or NOAA products. There are questions about liability and laws that require NOAA to reimburse the U.S. Treasury with funds from chart sales.

3M is undertaking market testing of print on demand nautical charts through chart agents in New York, San Francisco, and South Florida. If the market testing is successful, the program will go nationwide and NOAA would phase out producing the charts through lithography. These print on demand charts would cost more, estimated at \$20 each, be of poorer quality, but be more up to date.

If map librarians want to express an opinion on the print on demand proposal, we should contact Nancy Foster, the Assistant Administrator of NOAA. Her e-mail address is [nancy.foster@noaa.gov](mailto:nancy.foster@noaa.gov).

\* Additional historical information has been added from the USGS website.

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## ELECTRONIC MAPPING

Greetings from the Pacific Northwest, where summer finally arrived in September - and disappeared before we could get used to it. Classes are starting up again, and so it's time to gussy up the machines and order new information. With that in mind, here are some websites, books, and maps for you to peruse.

### Websites

GIS Data Depot has merged with SpatialNews.com and Spatial Graphics, to become GeoCommunity.com ([www.http://www.geocomm.com](http://www.geocomm.com)). The site still offers the multitude of free downloadable data for the US and the world that gisdatadepot.com offered, but the site also provides a newsletter service, a forum for questions, and free downloads, combining the features of the three websites into one. GIS Data Depot was mentioned in an earlier column, and still comes recommended for free, mostly USGS and public-domain data. Individual files can be downloaded, or custom CDs can be made with files of your choosing.

### Online Publications

The University of Oregon has unveiled a new electronic publication called "UOGIS-MAP Bulletin," a joint effort between the UO Geography Department and the Map and Aerial Photography (MAP) Library. The weekly bulletin focuses on "GIS issues that shape the campus community," and disseminates information on current issues, funding, conferences, calls for papers, data, and job opportunities. The list is available via the web at <http://libweb.uoregon.edu/map/GIS/Data/ucgis/ucgis-map.html> , and via email (send a message to [ucgis-map@lists.uoregon.edu](mailto:ucgis-map@lists.uoregon.edu) and include in the body of the message <subscribe your e-mail address>). You can also submit information for publication the following week.

### Technical Resources

I recently tried to install APSRS on a Windows NT machine, with no luck. Serendipitously, a few days later Mark Thomas (Duke University) posted this information to Maps-L, which fixes the APSRS problem:

*There's a configuration file called \_dw\_.cfg*

*Use a plain text editor like Notepad or Wordpad to open this file and edit a single line in it.*

*The line for "Driver" points to a default drive that we think was some sort of DOS environment variable. This needs to be changed to point to the real CD-ROM drive (in our case, the E:*

drive):

Driver = "E:\\"

Re-start APSRS, and it should execute without difficulty.

[editor's note: This should also work with other DataWare programs, such as the GNIS Digital Gazetteer.]

## **New Maps & Books**

The National Oceanic and Atmospheric Administration (NOAA) has proposed a new type of nautical chart, according to the May 1999 issue of GeoWorld ([www.geoplance.com](http://www.geoplance.com)). The new charts will use digital images and GIS to produce better, more detailed information for both the sea and shoreline. The prototype images, covering a portion of the Florida coast, utilize aerial photography as backdrops. Though the main objective is to produce new paper charts, NOAA is also considering digital products.

From ESRI Press comes a new book, "Extending ArcView GIS," for those who are familiar with ArcView and want to know more about its three main extensions: Spatial Analyst, 3D Analyst, and Network Analyst. The book comes with a CD, and is available for about \$50 from various bookstores, including ESRI's online bookstore (<http://gisstore.esri.com/>) although if you participate in an educational license from ESRI you are eligible for a 40 percent discount. Although I haven't yet taken an in-depth look at this book, the first book in the series, "Getting to Know ArcView GIS," was a useful introduction to ArcView: easy to follow for those brand new to GIS, useful for reference, also with a CD complete with exercises, data, and a run-time version of ArcView. The new book also features a chapter on the new Model Builder extension, which will ship later this year with the new version of Spatial Analyst.

## **ESRI Conference**

The annual ESRI Conference continues to attract a large number of people from libraries, many of whom are there to share their own experiences, as well as learn from other attendees and the vendors. Conference proceedings are available at [www.esri.com/library/userconf/archive.html](http://www.esri.com/library/userconf/archive.html). Using the Track List, you'll be able to easily locate papers for the higher education and libraries groups.

The conference continues to attract a growing number of library folks, who somehow manage to find each other even at the non-library events. The conference has grown so large that it's difficult to attend the vast number of interesting presentations, so the online archives are a useful resource to track down missed information. Use the Track Index to find the two sections

on Higher Education and Library Science, and Universities and Higher Education. Papers this year included "Toward a GIS for Library Administration and Research on the Internet," "Idaho Geospatial Data Center," and "Geodata Across the Campus Network: Library GIS Data Services at North Carolina State University." ESRI is already accepting abstracts for the 2000 conference; the deadline for submissions is October 29. See [www.esri.com/events/uc/index.html](http://www.esri.com/events/uc/index.html) for more information.

— *Jenny Stone*

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## NEW MAPS AND BOOKS

### New Maps

#### Four Corners

Those interested in Navajo culture, the Four Corners region of the southwest, Tony Hillerman mystery novels, or even Don Imus, will appreciate the products from Time Traveler Maps. The Colorado-based publisher has issued several beautiful and unusual maps focused on the area where Arizona, New Mexico, Colorado, and Utah come together.

*Image of the Four Corners* is a striking 25 x 37" 3D image simulating "the kind of view one would have high over the border of New Mexico and Arizona looking north." A laminated version (which I recommend) goes for \$18, or \$13.50 for paper. *Diné Bikéyah, Navajo Lands* takes a slightly smaller "Four Corners" image and overlays it with Navajo names for towns and topographical features, e.g. Na'nfzhoozhf for Gallup, N.M., and Ch'óóshgai for the Chuska Mountains. A decorative border of Navajo symbols surrounds the 24 x 36" map which sells for \$22.50, or \$27 laminated.

*Tony Hillerman's Indian Country Map & Guide* is very decorative map of the same area which also identifies locations and events from Hillerman's 13 Jim Chee and Joe Leaphorn mysteries. The reverse of the map has text describing the places keyed on the map. A great gift for the Hillerman fan at \$13.50. Time Traveler also has two more conventional, but equally well-done, maps of the Santa Catalina Mountains and the Colorado Plateau. All of their products can be seen, and ordered at a discount off their retail price, at their web site ([www.mapz.com](http://www.mapz.com)).

#### Two from the Brits

One of the most venerable organizations of its type is the Royal Geographic Society. Since 1831 it has been publishing journals under several titles: *The Geographical Journal* since 1893, and before that *Proceedings of the R.G.S.* and *Journal of the R.G.S.* Especially in their earlier years, separate maps were often folded into each issue. Extra copies of these maps were printed and many are still available, some dating back to the mid-1800s. The geographical areas, size, color, and price all vary. A complete list of these maps, and ordering information, is available from the RGS ([www.rgs.org](http://www.rgs.org)).

Another venerable British institution is the London Topographical Society, founded in 1880, which publishes books and maps illustrating the history, growth and topography of London. Their annual publication for 1999 is titled *Ward Maps of the City of London*, a history of how these maps came to be made, their changing styles, and the people who made them. A nice production of 84 pages, well-illustrated, with a catalog section listing 110 such maps, and

priced at £24 plus postage.

Examples of the Society's facsimile maps include their recent (1999) *Map of the Ecclesiastical Divisions within the County of London 1903*, and one of my favorites, Charles Booth's *Descriptive Map of London Poverty, 1889*. In his famous maps Booth documented London's social structure, using a system of color coding to identify the inhabitants of each street, from the wealthiest to the poor and criminal classes. The four map sheets, in full color with separate introductory text, sell for £20. Descriptions of all the London Topographical Society publications and membership information can be found at ([www.topsoc.org](http://www.topsoc.org)).

## **Gauchos on the Pampas**

Zagier & Urruty is an Argentine publisher whose interests seem focused on the southern tip of South America and Antarctica. Among the more recent (1998) of their attractive maps are *Patagonia Ecomapa*, a road and travel map of this area of Argentina and Chile, with wildlife drawings, insets for national parks, and info on campsites, hotels, trails, etc., at a 1:2,300,000 scale and measuring 36 x 25". *Tierra del Fuego, Sector Argentina* is a 1:400,000 map of the Argentine sector of Tierra del Fuego, with lines showing Estate (Estancia) Borders.

*Antarctic Peninsula, Antarctica* is a highly detailed map with color illustrations of Antarctic birds and mammals, done at a 1:1,500,000 scale, with English/Spanish text (most of this publisher's other maps are only in Spanish). All are priced at \$15.95 from Treaty Oak, which has illustrations of all the Zagier & Urruty maps on their web site ([www.treatyoak.com](http://www.treatyoak.com)).

## **On the Lighter Side**

Coop's Maps, perhaps best known for their maps depicting locations of microbreweries and brewpubs, has a new series. Their *Maps to Dinosaur Sites and Museums*, which cover the U. S. in 4 regional maps Western, Central, Northeastern, and Southern North America list "all things prehistoric, including locations displaying dinosaurs and other prehistoric fossils, theme parks, and roadside attractions." On one side is a map that uses little dino icons to show locations; the reverse has data on the exhibits, listed by state and city, as well as information about dinosaurs. I don't know if dinosaurs are still as popular with kids as they used to be, but the maps are fun and relatively inexpensive at \$5.95 each. A sample and ordering info can be found at their site ([www.coopsmaps.com](http://www.coopsmaps.com)).

For the sports fan, the Lawrence Group publishes a series of *SportsMaps*. Focused mainly on football, the maps, which are available for all NFL and a few college teams, feature a state map with some city insets, stadium schematics, parking and ticket info, player photos, and of course a cool "custom team cover." For us "good ol' boys" they also have a NASCAR Winston Cup map showing race locations, a calendar, and track maps. All sell for \$3.95 (except the NASCAR at \$4.95) and can be seen and ordered at ([www.lawrencegroup.com](http://www.lawrencegroup.com)).

## Quick Picks

Lonely Planet, best known for their travel guides, have started a new series of city maps. The plastic coated folded maps, priced at \$5.95, are fully indexed, show downtown and metropolitan areas, transit routes, and "unique walking tours." Their small size (most are about 9 x 24") make them more suited for their stated purpose—travel maps—than for reference. Maps for 11 cities, from Bangkok to Sydney, were issued in July, with 6 more due in November. ([www.lonelyplanet.com](http://www.lonelyplanet.com))

WorldSat International is a Canadian company that makes a number of products using satellite imagery. New items include satellite poster images of the Czech Republic and the city of Prague, both 25 x 38" and priced at \$18 paper or \$24 laminated. Their web site also has an interesting page describing the steps taken to create the satellite image of Kashmir that appeared in the September 1999 issue of *National Geographic*. ([www.worldsat.ca](http://www.worldsat.ca))

From Raven Maps comes a new and beautiful shaded relief map of North America. "The most precise single sheet map of North America ever produced" may be marketing hyperbole, but the 42 x 43", 1:9 million map is certainly striking. \$40 plain, \$60 laminated. ([www.ravenmaps.com](http://www.ravenmaps.com))

Nelles has issued a new shaded relief map of *Central Asia* at 1:1,750,000, covering Turkmenistan, Uzbekistan, Tajikistan, and Kyrgyzstan, with small city inset maps of Ashgabat, Tashkent, Dushanbe and Bishkek, all for \$8.95. MapLink has also announced a new map of Central Asia, produced in conjunction with the Hungarian publisher GiziMap. Same scale and same price as the Nelles map, and covering "Southern Kazakhstan, Kyrgyzstan, Tajikistan, Eastern Turkmenistan, and Uzbekistan." (Trying saying that quickly three times.)

And for something a little different, the American University of Armenia has created the *Republic of Armenia*, a 1999, 1:500,000 map of Armenia that includes the precise geographic location of each ornithological record in *A Field Guide to the Birds of Armenia*, by Martin S. Admian, published in Oakland, CA by the AUA in 1997. The map sells for \$8.95 from MapLink.

## New Books and Atlases

*Historical Atlas of the Pacific Northwest: Maps of Exploration and Discovery: British Columbia, Washington, Oregon, Alaska, Yukon*. Derek Hayes. Seattle: Sasquatch Books, 1999. 208 p. \$35 (ISBN 1570612153). A nice collection of over 300 reproductions, many in color, of maps of historical interest. Published in Canada under a slightly different title, *Historical Atlas of British Columbia and the Pacific Northwest*, by Cavendish Books, which has a lengthy description on their web site ([www.cavendishbooks.ca](http://www.cavendishbooks.ca)).

*Mapping and Naming the Moon: A History of Lunar Cartography and Nomenclature.* Ewen A. Whitaker. Cambridge: Cambridge University Press, 1999. 242 p. \$39.95 (ISBN: 0521622484). A somewhat unusual but interesting book that traces the origins and evolution of the present-day systems for naming lunar features, such as craters, valleys, and dark spots. It also follows the history of lunar maps over four centuries, with many black and white illustrations documenting progress in our ability to map the moon. With 22 appendices tracing the history of lunar nomenclature, this is a somewhat specialized, scholarly, but accessible work on a rather esoteric topic ("selenography," if you want to impress your friends).

HelenJane Armstrong at the Maps and Imagery Library at the University of Florida has recently compiled *Antique Maps of the Holy Land in the University of Florida Libraries*. The annotated cartobibliography of 107 maps and two atlases focuses on a collection recently donated to the University. The 53-page work, which includes 15 color reproductions, is being published in a limited edition for \$40. Copies are available from the Administrative Office, George A. Smathers Library, University of Florida, P.O. Box 117001, Gainesville, FL 32611-7001, and checks should be made out to the University of Florida Foundation. Some of the maps can be viewed at their web site ([web.uflib.ufl.edu/maps/MAPHOLY01.HTML](http://web.uflib.ufl.edu/maps/MAPHOLY01.HTML))

## Coming Soon

Here are some titles with announced publication dates between the time I write this and the time this issue of *base line* will arrive at your door. Some will be mentioned again, but they all bear a careful look.

*Maps and Mapmakers of the Civil War.* Earl B. McElfresh. New York : Harry N. Abrams, (Oct.) 1999. 272 p. \$55 (ISBN 0810934302). McElfresh, a cartographer who creates those wonderful hand-drawn maps of Civil War battlefields, is evidently also a map historian. This promises to be an impressive book, with 180 illustrations of the war's "most notable, interesting, and beautiful maps."

*Mapping the Great Irish Famine: An Atlas of the Famine Years.* L. A. Clarkson, et al. Dublin, Ireland; Portland, OR: Four Courts Press, (Sept.) 1999. 208 p. \$60 HC, \$30 pap. (ISBN 1851823530). "The first comprehensive attempt to represent cartographically the dramatic impact that the Great Potato Famine had on Ireland."

*Early Mapping of Southeast Asia.* Thomas Suarez. Periplus Editions, (Oct.) 1999. \$65 (ISBN 9625934707). "The story of mapmaking, exploration, and colonization from the 16<sup>th</sup> to 19<sup>th</sup> centuries."

*Mapping Boston.* Edited by Alex Krieger and David Cobb. Cambridge: MIT Press, (Oct.) 1999. 272 p. \$50 (ISBN 0262112442). A long-awaited and much anticipated work, co-edited by David Cobb, a colleague who works at a small college somewhere near Boston.

## Special Journal Issues

Those who aren't regular readers of *Cartography and Geographic Information Science* (formerly *Cartography and Geographic Information Systems*, and the earlier *American Cartographer*), and I include myself here, may have missed the July 1999 issue devoted to "The State of U.S. Cartography." Three substantial review articles cover "The State of Government Cartography in 1998," "The Digital New World Order: A View from the Private Sector," and "The State of Academic Cartography." Even more digestible are the 53 brief "Notes" scattered through the issue on a wide variety of topics, from "NIMA Digital Geospatial Products" to "The Web as the New Medium for Cartography." Worth browsing through.

Also of interest is the most recent issue of *Cartographica*, Vol. 35, Nos. 3/4, Autumn & Winter 1998 (but published July 1999, and also titled *Monograph 52*). With the overall title of "Cartography and Statecraft: Studies in Governmental Mapmaking in Modern Europe and Its Colonies," and edited by James Akerman, it includes ten historical articles originally presented in earlier forms at the Fifteenth International Conference on the History of Cartography held at the Newberry Library in June 1993. If not a subscriber, single issues can be purchased for \$25 plus postage from the University of Toronto Press ([www.utpress.utoronto.ca/journal](http://www.utpress.utoronto.ca/journal)).

## Gift Suggestions for Map Lovers

Since the December issue of *base line* probably won't reach our readers until late into the holiday season, we've gathered some gift suggestions for those enviable folks who do their shopping early. Books (and maps) still make perfect gifts, of course, but here are a few non-book items that might appeal to map lovers.

Map ties are perennial favorites, and although some require a certain amount of fashion risk-taking, they seem to function well as conference ice-breakers. The Flax Art & Design catalog has a number of unusual ties among their "wearable art." One of the more subdued features an "old world exploration map," made of fine silk and only \$32. Another entry in the tie category comes from the Society for the History of Discoveries. Their "Terra Incognita tie" is based on a 1663 Pieter Goos map and sells for \$48.60. At their web site ([www.sochistdisc.org](http://www.sochistdisc.org)) you can even see pictures of several SHD members bold enough to let themselves be photographed wearing said tie. The SHD also offers a nice line of postcards and note cards featuring both the Terra Incognita and compass rose designs. Prices and ordering information at their web site.

The "Living Earth" is oft-seen satellite image poster of the entire earth produced by a company called Spaceshots. The posters, which make great wall hangings, are available from most major vendors or direct from the company at \$14.95 for the 24 x 36" size (\$27.95 laminated), or \$45.95 for the 36 x 58" mural size (\$69.95 laminated). Spaceshots has a number of other

posters, note cards, postcards, and bookmarks ("Space Markers") with their space image themes. A bit more unusual fun item is their round "earth mouse pad," 8.5" in diameter, for \$11.95. For coffee (or tea) drinkers they also have a "Living Earth" blue mug for \$10.95, and for puzzle enthusiasts, a 1000-piece Living Earth puzzle. All of their products can be seen at ([www.spaceshots.com](http://www.spaceshots.com)).

One gift that I probably will never be able to afford is the famous Geochron Global Time Indicator. The Geochron is that map with the moving illuminated pattern that shows which areas of the world are in daylight at any given moment. Unfortunately prices start at around \$1400 and go up from there. To the rescue comes Geochron's "World Watch Time Piece for Windows," a screen saver program that has similar features and displays the same Geochron daylight-or-dark image on your own PC, and all for only \$49.95. The Map Store of Minnesota has lots of information about the Geochron products at its web site ([www.freemap.com](http://www.freemap.com)).

And for the rough drafts of this *base line* column, I find particularly useful the antique map wastebasket from the Touch of Class catalog. An antique map design is printed on the parchment paper outside cover, with the interior lined in black vinyl. Nice, but a bit pricey at \$44.75

—*Fred Musto*

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