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news release

A beautiful new "Shaded Relief" map of North America has been published as part of the National Atlas of the United States. Digital elevation data and computer software were used to produce a stunning portrait of America's terrain.

The terrain is "illuminated" from the northwest with a simulated sun angle of 45 degrees. 23 distinct color tones depict broad elevation ranges. Within each color range, the lightest color tones represent fully illuminated steep slopes and the darkest tones represent steep areas in shadow. This is a particularly effective method for portraying relief since this "hill shading" technique produces an easily interpreted image of the landscape and a good impression of general elevation.

The map measures 39" by 43.5", is published at the scale of 1:10,000,000, and covers all of North America.

The "Shaded Relief" map is available from USGS Information Services, Box 25286, Denver, Co 80225. The price is $7.00 per sheet, plus $5.00 handling per order. The stock number is TUS5682. Credit card orders may be faxed to 303-202-4693. Please include the credit card number and expiration date.

The National Atlas of the United States of America is designed to promote greater geographic awareness through the development and delivery of products that provide easy to use, map-like views of our natural and socio-cultural landscapes. Visit the national atlas online at http://www.usgs.gov/atlas.

cuac minutes

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

Most of the 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 the answer was 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 from sales receipts. The data for producing 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 the Bureau and other agencies. The data comes from several sources:

- paper maps
- models (for instance, there is a current project relating to modeling dam failure which uses DEM and TIGER data)
- 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 are involved with 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 the 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 the 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 stand still. 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 utilized at 16 park units.

During Fiscal Year 98, $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 99, $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 sheet 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 an inventory of data themes, identifying and prioritizing data, determining proprietary versus non-proprietary data, participating in the Colorado Ecosystem Project (which is a metadata

library project), and developing 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 http://www.nps.gov/gis and the Intermountain GIS Program web address is http://129.24.219.53/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 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 (DLG) for parks, and is working with other agencies.

- The Office is working with ESRI on vegetation of parks—very detailed–developing interim publications.

- Through the FGDC the Intermountain Region data are available via the Internet and 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 with GIS functionality. 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 ½ years. Members of the Users Group share information on an FTP server maintained by the National Park Service.

U.S. GEOLGICAL 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 Operational 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 help do the job of information dissemination. Archives 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 revision processes.

The discussion of the graphics program (the paper map products) looked briefly at some of the following areas: 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 products.

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 and, 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; and 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 costs about $40 – 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. Thus, to insure that this national asset continues will require the division to restructure 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, 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 costs about $.25 per map and the minor revision process costs about $.75 per map. 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 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? What are the mapping priorities for the country? Why would the consumer buy a new map?

Currently topos 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 to focus on revision of the maps which are high selling—about 1000 with the overall strategy to update the topos.

Other topics discussed:

- There is discussion about reprinting the top 100-150 of the high selling 15-minute quads.
- 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:

- The National Hydrography Database (NHD) which is a cooperative venture with EPA and the Water Resources Division of USGS and derived from hydro digital land graphs and EPA RF 3 data.
- The National Elevation Database (NED) derived from the digital elevation models (DEM).
- The digital orthophoto quad (DOQ) and the digital elevation models (DEM). Completion time frame for national coverage is 1-2 years.
- 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 used to identify and replace changed information.
- 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[1*]

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

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 strategy for the program. Later that year, NASA, NOAA, and USGS met about the 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 the price being what 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. This is another pricing look—the turnaround theme for delivery: when raw data comes in it can probably come out the next day. But if it has to be manipulated, it takes another day, and level 1P takes three days. All Landsat data is copyright free. The pricing history of Landsat data was 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 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 cooperator role in seeing that standards are defined and also establish 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 is a DOS base 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 piece.

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.

Q: Can we get a list of the map dealers that offer overnight map delivery?
A: List will be sent to attendees.

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. 119th 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 printed 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, contact Nancy Foster, the Assistant Administrator of NOAA. Her e-mail address is nancy.foster@noaa.gov.

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

[1*] Additional historical information have been added from the USGS website.

announcements

Symposium on Maps and the Internet
October 11, 2000
Knoxville, TN

NACIS and the Commission on Maps and the Internet of the International Cartographic Association are sponsoring a one-day symposium that will precede the annual NACIS meeting. The symposium will consist of 2-3 paper sessions and breakout sessions that address the terms of reference of the newly established commission. A web page for the commission can be found at: http: / / maps.unomaha.edu / ica / . Papers given at the Symposium will be considered for a special issue of *Cartographic Perspectives*. If you are interested in presenting a paper or attending the symposium, please contact the Symposium organizer at: Michael_Peterson@unomaha.edu.

Submission Guidelines for *Cartographic Perspectives*

The editors of *Cartographic Perspectives* welcome contributions. There are several content areas that are available for submissions.

FEATURED PAPERS

Each issue of *Cartographic Perspectives* includes featured papers, which are refereed articles reporting original work of interest to NACIS's diverse membership.

REVIEWS

The Book Review Editor solicits reviews of books and atlases.

CARTOGRAPHIC TECHNIQUES

Articles that concern all aspects of map design and production are solicited by the Cartographic Techniques Editor.

ONLINE MAPPING

Articles that concern all aspects of Internet related mapping applications are solicited by the Online Mapping Editor.

MAP LIBRARY BULLETIN BOARD

The Map Library Bulletin Board Editor solicits reports on the current status of map libraries.

Complete information on guidelines and who to contact for submissions to each section can be found on the NACIS website:
www.nacis.org