GEOSCIENCE INFORMATION SOCIETY

newsletter

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PRESIDENT'S COLUMN

We are happy to announce that the new Vice-President responsible for planning the annual meeting in 1997 and the 1997/1998 President is Connie Manson who will be assisted by Lisa Dunn as incoming Secretary. We congratulate both of them on their election and thank those who were willing to volunteer their time as candidates.

Connie will be leaving her long held post as newsletter editor and is eager for new duties. When I talked to her recently she had already developed ideas for the 1997 symposium. She will leave a legacy of making our newsletter an important means of communication. Our society will need a new editor who will have an excellent mentor in Connie and not have to start from the beginning. She reports that, with the use of the computer and electronic communication, the job is considerably easier and the newsletter goes together quickly as compared to when she first began. Anyone interested in becoming editor can check with Connie about what is involved. Connie has been the editor for many years, but it can be a term appointment just as officer positions are.

Many of our committee members are coming to the end of their appointments and a new slate of members or promises of continuing to work on a committee are needed. Within the next two months, I will be calling or e-mailing many, many members before the annual meeting to see what committee slots are of interest to them for the next year. If you are interested in continuing beyond your present term, are interested in becoming chairman of a committee, or eager to try out a new assignment, please let me know.

Barbara DeFelice as Vice-President and Program Chairman this year has worked long and hard to develop an innovative program for our annual meeting. I am looking forward to attending the programs she has planned so carefully and hope to see all of you in Denver very soon. Thanx, Nancy

VICE PRESIDENT'S COLUMN

Planning for the upcoming annual meeting in Denver is going smoothly. The schedule is included in this newsletter, but it is always important to check the final conference program to verify details. Most of the GIS meetings are in the Marriott, although the GIS reception is in the Hyatt, along with the alumni receptions. The Digital Database Forum and the paper and poster sessions are all in the convention center. You should have received registration information from GSA; be sure to include the GIS luncheon in your registration, since tickets are not usually available that day.

I hope the schedule allows time for participants to go to a wide variety of presentations, see the exhibits, and engage in discussions with colleagues, all beneficial aspects of attending a GSA meeting. Highlights of this year's meeting include the Digital Database Forum, which will concentrate on using Web accessible data in geographic information systems. Along with the packed days of meetings and presentations, we have fun and relaxing social events scheduled. Joanne Lerud and the staff at the Arthur Lakes Library will be treating us to a special reception in the library at the Colorado School of Mines on Tuesday evening. Certainly do not miss the opportunity to register for the field trip on Thursday morning! The information and registration form that was in the April issue is repeated in this issue for your convenience. See you in Denver!

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The GIS Newsletter is published bi-monthly in February, April, June, August, October, and December by the Geoscience Information Society. Subscription to the Newsletter is $40 per year and is included in the Society's annual membership dues. All correspondence regarding dues, membership status, and address changes should be directed to the GIS Secretary.

GIS members are encouraged to contribute materials for publication. Due to current vacancies, all materials--research articles, technical reports, information reports, officer and committee reports, publication notices, job announcements, and other news items--should be sent to the Newsletter Editor until further notice.

Material for the October, 1996 issue of the GIS Newsletter should be received no later than September 20, 1996. If possible please send materials by e-mail or on IBM-compatible disk (Wordstar 3.3, Wordperfect 5.1, or ASCII format).

GEOSCIENCE INFORMATION SOCIETY
Annual Meeting Preliminary Schedule
October 27-October 31, 1996

Sunday, October 27	
9:00 am-noon	GIS 1996 Executive Board Meeting (Open to members): Marriott City Center: Denver BallroomV
2:00 pm-5:00 pm	GIS Digital Database Forum: Colorado Convention Center A214
Monday, October 28	
8:00 am-9:30 am	GIS Professional Issues: Marriott City Center: Colorado A & B
10:00 am-noon	GIS Collection Development Issues: Marriott City Center: Colorado C & D
2:00 pm-5:00 pm	GIS Annual Business Meeting: Marriott City Center: Denver 5 & 6
7:00 pm-9:30 pm	GIS Reception: Hyatt Regency: Pavillion
Tuesday, October 29	
8:00 am-11:45 am	GIS Symposium: Expanding Boundaries: Geoscience Information for Earth System Science: Colorado Convention Center A202-A204
12:30 pm-2:00 pm	GIS Luncheon and Awards: Marriott City Center: Denver Ballroom V & VI; Pre-registration required
1:30 pm-5:30 pm	GIS Poster Session: Colorado Convention Center Hall B1
3:00 pm-5:00 pm	GIS GeoRef Users Group: Marriott City Center: Denver Ballroom IV
7:00 pm	Special Reception: Arthur Lakes Library, Colorado School of Mines, Golden Colorado, travel arrangements to be announced
Wednesday, October 30	
8:00 am-9:45 am	GIS Technical Session: Current Trends, Future Plans: Colorado Convention Center C109
5 pm-8 pm	GIS 1996/1997 Executive Board Meeting (Officers only) Location to be Announced
Thursday, October 31	
8:00 am - 2 pm	GIS Field Trip (including a lunch stop); Pre-registration with Joanne Lerud required

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DENVER MEETING NOTES

Digital Database Forum: Sunday, October 27, 2:00 p.m. to 5 p.m.

The Digital Database Forum offers participants an opportunity to learn out about products and services in the area of digital data and information sources. The presenters at this year's Database Forum will focus on the use of a variety of data in Geographic Information Systems for geological applications. They will demonstrate techniques of locating, downloading, and manipulating data from the Internet, the World Wide Web and other sources for use with Geographic Information Systems. Representatives of several major GIS vendors and publishers of data will be the presenters.

There is no fee or registration. For further information, contact: Vivienne R. Roumani-Denn, 230 McCone Hall, University of California-Berkeley, Berkeley, CA 94708, (510) 643-7041, fax (510) 643-6576, e-mail: vroumani@library.berkeley.edu

Collection Development Issues Committee: Monday, October 28, 10:00 am-noon

The GIS Collection Development Issues Committee has planned an interesting program for those attending the Denver meeting. We'll start with the annual monograph and serial pricing data presentations and discussion. This will be followed by a general discussion on funding geoscience information resources in libraries. We'll look at the allocation/decision process in libraries, agencies, corporations for book and serial funds (including serial inflation), maps, electronic journals, bibliographic databases, including networked ones, and consortial purchases.

Anyone interested in sharing information about their local situation (either for attribution or not), can send it to:

Steve Hiller - fax:(206) 685-1665
Head, Science Libraries Box 352900
University of Washington
Seattle, WA 98195 email: hiller@u.washington.edu

Field Trip: Thursday, October 31, 8:00 am - 2 pm

WALK WHERE AN IGUANODON WALKED!

PAN FOR GOLD! PIG OUT ON PIZZA!

Members, friends, significant others, and interested persons are cordially invited to participate in a field trip to Dinosaur Ridge and the Argo Gold Mill, followed by lunch at Beau Jo's in Idaho Springs. The bus will leave the Convention Center at 8:00 a.m. sharp on Thursday, October 31 (costumes allowed but only if they allow you to possibly be a little muddy and probably prepared for cool weather). First stop is Dinosaur Ridge, where Iguanodan and ostrich-like dinosaur tracks were discovered in 1937 and additional excavations have exposed new tracks. Bones from Allosaurus, Stegosaurus and Brontosaurus were discovered here in 1877 (by Arthur Lakes himself), starting the dinosaur rush to the West. Next a drive to historical Idaho Springs for a tour of the Argo Gold Mill for a bit of the mining lore. Then, lunch at Beau Jo's with pizza to die for! I believe I can guarantee that we will be back to the Convention Center by 2:00 p.m. perhaps a little before for those who wish to plan flights accordingly. Thirty people are needed for a good time (and solvency). Forty-five will be too much fun.

Send $40.00 (American; checks can be made to me with a notation for GIS field trip) per person by August 31, 1996, with the form below to:

Joanne Lerud
Arthur Lakes Library
Colorado School of Mines
Golden, Colorado 80401 USA

Name:_____

Number of people in your party:_____

Address: _____

_____

_____

Phone number: _____

If field trip is cancelled, money will be returned. (That's why you are giving me the address above.) There will be a Plan B in case of blizzard in the mountains.

GIS-Mary B. Ansari Best Reference Work Award: Tuesday, October 29, 12:30-2:00 pm

The GIS-Mary B. Ansari Best Reference Work Award has been awarded to Thomas J. Ahrens, California Institute of Technology, for his three-volume work, A Handbook of Physical Constants, 3rd edition (American Geophysical Union, 1995). The award will be presented Tuesday, October 29, 1996, at the GIS luncheon.

New GIS Officers

The GIS Nominating Committee is pleased to announce that Connie Manson has been elected Vice President/President Elect and that Lisa Dunn has been elected Secretary. We are grateful to Clara McLeod and Carolyn Laffoon for running.

-- Barbara Haner, chair

MEMBER NEWS

LISA RECUPERO has received the Special Libraries Association Geography and Map Division's Bill M. Woods Award for the best feature article to appear in the Geography and Map Division Bulletin during 1995. Her article, "Map Users and Map Reference: Some Considerations for Map Librarians," appeared in the June issue of the Bulletin. The award was presented to Ms. Recupero at the Special Libraries Association 87th annual conference held in Boston, Massachusetts from June 8-13, 1996.

SUSAN KLIMLEY reports that Lisa Fish is the new Geological Sciences Librarian for Lamont-Doherty Earth Observatory of Columbia University. Lisa comes to Columbia from Linda Hall Library and is already on the job. Lisa and Susan have submitted an abstract for GSA and Lisa plans to present that paper in Denver. After several months of being acting mathematics librarian, Susan is once more digital projects librarian for the science and engineering libraries at Columbia. She said, "I was very pleased this position was made permanent and I look forward to continuing my work in digital text and web development. I also continue my role as head of materials processing for the science libraries. Last but not least, we have brought the oversized maps, other illustrative materials and text of the New York State Museum Bulletin together in a new web site (http://www.columbia.edu/dlc/nysmb/). We are still experimenting with the structure that allows the user to move between the images and the text as well as through the text. It is uncharted territory and we would be interested in your comments and suggestions. I continue to put links to other projects that you might find interesting on my homepage (http://www.columbia.edu/~klimley). I linked the New York Public Library project that allows you to zoom in to preselected areas."

GEOSCIENCE INFORMATION SOCIETY
GIS Symposium:
Expanding Boundaries:
Geoscience Information for Earth System Science
Tuesday, October 29, 8:00 am-11:45 am

Earth System Science: The real environmental science.

MUSSER, Linda R., Earth and Mineral Sciences Library, Penn State University, 105 Deike Building, University Park, PA 16802, Irm@psulias. psu. edu.

Many view the 1960s and early 70s as the time of awakening of environmental awareness among the general public. This period saw the creation of the Environmental Protection Agency, the first Earth Day, and the publication of Rachel Carson's Silent Spring. Yet, in reality, these concerns were less environmental than ecological. "Save the Whales!" "Give a hoot, don't pollute." Love Canal. The Cuyahoga burns! These concerns all relate to the living aspects of Planet Earth.

True environmental science concerns itself not only with the living or biological aspects of the planet but with its physical aspects as well. This inclusiveness is what characterizes earth system science and makes it the real science of the environment.

Just as ecology poses challenges for researchers and information professionals in that it requires collaboration and integration among the various disciplines of the biological sciences, earth system science requires collaboration among biological, physical and social sciences. While earth system science researchers range from subject specialists to interdisciplinarians, the resources required to support earth system science research must encompass a range of disciplines and techniques.

Interdisciplinary use of science information by geology faculty and graduate students: Implicationns for library services.

SCOTT, Sally J., Science Library, University of Wyoming, P.O. Box 3262, Laramie, WY 82071-3262, sscott@uwyo.edu.

The boundaries between scientific disciplines have blurred as evidenced by an increasing number of interdisciplinary books and journals. The geosciences have always been interdisciplinary, depending heavily on an understanding of the basic and associated sciences. Developments in chemistry, physics, molecular biology, and astronomy, e.g., have directly impacted the interpretation of geologic history and our understanding of biological and planetary evolution. How extensively do geoscientists use the information resources in related sciences? What implications does this have for managing resources and services in libraries? The geology faculry and graduate students at the University of Wyoming were surveyed to determine their use of the information resources in the Science Library. The results of the survey and their implications are discussed in this paper.

Opportunities and challenges in evaluation and dissemination of geoscience educational materials.

MOGK, D. W., and ZIA, L. L., Division of Undergraduate Education, National Science Foundation, 4201 Wilson Blvd., Arlington, VA 22230, dmogk*nsf.gov, Izia@nsf.gov.

National mandates for the training of scientifically literate citizens have provided the impetus for development of a wide variety of innovative and engaging educational materials. The challenge is to develop effective validation and dissemination mechanisms. The Division of Undergraduate Education (National Science Foundation) supports improvement of science education through programs such as Course and Curriculum Development, Undergraduate Faculty Enhancement, and Instrumentation and Laboratory Improvement, with special emphasis on preparation of future science teachers, school-to-work, and institution-wide reform programs. Educational materials generated from these programs may take the form of traditional textbooks, journal articles, or proceedings from workshops that demonstrate the use of "best practices" or new materials. However, recent technological advances also provide new opportunities in use of computer-assisted learning (including WWW, CD-ROMs, GIS, visualization, simulation, modeling, quantification, and communication activities), integration of research technologies into the learning environment, and development of new types of hands-on educational devices. There is a compelling need to make these materials widely accessible for use throughout the educational community, and there should be concomitant incentives for all faculty to utilize these resources.

Electronic media will play a central role in the promotion of these new educational materials.

However, the following practical functions must be addressed: 1) evaluation; at the present time few standards exist for presentation of information on the WWW, and scholars must have confidence that these materials meet high standards and have been tested for overall effec-

tiveness. Peer review of new materials is essential prior to broad dissemination, and commentary on electronic servers can track the use of these materials as they are adopted and adapted at other institutions. A strong evaluation component is essential to confer rewards and recognition on faculty who contribute to research and development of effective teaching and learning practices. 2) Archival functions are essential to provide ease of access, including abstracting and indexing services; hyperlinking provides new opportunities for broad dissemination within and across scientific disciplines. However, there is a danger that too much, poorly organized, low-quality material is becoming available, thus rendering the information systems ineffective. 3) Delivery systems should allow users to efficiently search for specific information, and to receive automatic delivery of materials according to pre--formatted user profiles.

Building a digital library for Earth System Science: The Alexandria Project.

BUTTENFIELD, Barbara P., Department of Geography, Campus Box 260, University of Colorado, Boulder, CO 80309, babs@colorado.edu and LARSEN, Suzanne T., Earth Sciences Library, Campus Box 184, University of Colorado, Boulder, CO 80309 suzanne.larsen@colorado.edu.

A digital library should be more than a physical library in electronic form. In a digital library, traditional distinctions between books, digital spatial coordinates, maps and satellite imagery should become transparent to library patrons. It should be possible to retrieve maps and images and overlay them with digital attributes from another data source.

The digital library catalog should include digital files that are archived in depositories distributed across the nation. It should be possible to browse spatial metadata prior to downloading files. Patrons should be able to visit the library without ever leaving their own offices. Our presentation will provide an overview on the Alexandria Digital Library project (ADL), which is being developed to provide comprehensive library services of a map and imagery library over the Internet. We will describe the origins of ADL, and of merging maps and images into the library information mainstream. We will describe the development of the ADL prototypes, and focus on the features of the current implementation that distinguish ADL from other efforts. The publicly accessible Web implementation site will be presented.

We will present research issues raised by ADL and their likely impact on the accessibility of spatial data to earth system scientists in the future.

Providing access to earth-sciences spatial data: Metadata and the Alexandria Digital Library

LARSGAARD, Mary, Map and Image Laboratory, Library, University of California, Santa Barbara, CA 93106-9010, mary@sdc.ucsb.edu.

This paper will give an overview of the work done in the Alexandria Digital Library (ADL) on metadata for spatial data. This project of the University of California at Santa Barbara is one of six Digital Library Initiatives funded by NSF, ARPA, and NASA.

The object of the Alexandria Project is to develop a distributed digital library for geographically-referenced information. Distributed means the library's components may be spread across the Internet, as well as coexisting on a single desktop. Geographically- referenced means that all the objects in the library will be associated with one or more regions ("footprints") on the surface of the Earth. The centerpiece of the Alexandria Project is the Alexandria Digital Library (ADL), an online information system inspired by the Map and Imagery Laboratory (MIL) in the Davidson Library at the University of California, Santa Barbara. The ADL currently provides access over the World Wide Web to a subset of the MIL's holdings, as well as other geographic datasets.

Metadata is data about data, which includes but is intended eventually to extend beyond what is provided in online library catalogs. It is essential to the retrieval of information. There will be some discussion of the recent history of standards efforts in this area, who is using these standards, and what impact this work is having or will have on users and producers of geographic information systems.

The Dartmouth Flood Observatory: An electronic research tool and archive for investigations of extreme flood events.

BRAKENRIDGE, G. Robert, Surficial Processes Lab, Geography Department, Dartmouth College, Hanover, NH 03755.

Extreme floods occur only rarely in any particular location, but when the Earth as a whole is considered, such events are frequent: almost 2/week. By late May in 1996, at least 38 extreme floods had occurred; these had caused more than 520 fatalities and approximately $1.4 billion in property and crop damage. A global outlook is thus essential for the scientific study of extreme floods. One technique for global flood studies is satellite remote sensing. Cloud cover once made remote sensing of river floods difficult or impossible, but, following launch in 1991 of ERS-1 by the European Space Agency, data from an expanding new generation of high resolution synthetic

aperture radar satellites are available. These satellites are now capturing peak and near-peak flood conditions along many river valleys and through heavy cloud cover such as that induced by tropical storms or hurricanes. The Dartmouth Flood Observatory is an online Internet resource designed to serve as a research tool for focused efforts to understand the origins, geographical distributions, frequencies, and magnitudes of extreme floods. It includes a frequently updated listing of reported floods, a global map showing flood-affected regions, and an accumulating array of satellite-based image maps showing flooded river valleys from diverse geographical contexts.

The observatory was not designed as a data repository or archive, but it provides some of the functions of such a facility. The investigators who created the resource use it as a research tool, but regional planners, disaster relief workers, the news media, and the general public have their own uses for accurate maps of flooded lands, and including long after the flood occurrence. How should such electronic maps best be preserved and made available to the public? Should they be recorded on some form of hard copy (or on CD-ROMS)? The maps are not presently accessible through any library cataloging system, but using a search engine on the Internet by typing, "flood image maps" immediately locates the resource.

Future publication plans of the U.S. Geological Survey: Paper plans, electronic dreams.

SMITH, James G., US Geol. Surv., Volcano Hazards Program 345 Middlefield Rd, Menlo Park CA 94025, jimsigp@ mojave.wr.usgs.gov.

The USGS is a large publisher of books and maps (5.2 M maps sold in FY96). Unusual factors influence its publication policies; for example, USGS publications are not copyrighted and anyone may reproduce USGS data.Money from book sales goes to the U.S. Treasury; this reduces incentives for large press runs, and encourages reprinting of "best sellers". The Administration and Congress encourage Federal agencies to distribute data and publications on-line.

National Mapping, Water Resources, and Geologic Divisions are presently developing plans for product redesign and for streamlining information and publication processing. Issues such as archiving and version control of electronic documents remain largely unaddressed. The National Biological Service joins the USGS as the Biological Resources Division in October 1996, bringing its own publication issues.

Trends are clear, details uncertain, but the future USGS will: 1. Consolidate existing formal publication series. 2. Disseminate electronic versions of paper products (e.g., a Professional Paper will be available in Adobe PDF or in HTML for World Wide Web (WWW) distribution). 3. Distribute many books and maps using print-on-demand technologies to fill customer orders. 4. Publish purely electronic documents to save printing costs, speed delivery, and facilitate updates. 5. Distribute information electronically that cannot be printed or that is unwanted in paper form (e.g., video fly through animation of Mt. Rainier eruption scenarios or a spatial data base used to generate a complex geologic map). 6. Distribute more information via the WWW without series title, version number, etc. (e.g., near-real-time stream-flow data; periodically updated statements of status and recent activity for Long Valley Caldera; computer generated, near-real-time, earthquake-epicenter maps). 7. Allow mass customization of products (e.g., users access WRD's stream-flow data on the WWW, select a particular stream gage, time interval, and tabular or graphic output to create a data set). The discussion continues.

Written in the stones: Expanding the boundaries of geoscience literature.

NEWMAN, Linda P., Mines Library/MS322, University of Nevada, Reno, Nevada 89557, lnewman@unr.edu; PAUSCH, Lois, Geology Library, 223 Natural History Building, University of Illinois at Urbana Champaign, 1301 West Green Street, Urbana, Illinois 61801, pausch@uiuc.edu.

This presentation reflects the authors overview of geology as they have found it in the literature including citations to the principal works over the centuries. This review of the field of geology is intended, ultimately, for the non-professional. It is presented here for the geoscience information professional, including but not limited to those responsible for collection development, who want to extend their field to anyone seeking to know more about the natural forces and terrain of the earth. A summary bibliography will be available.

GEOSCIENCE INFORMATION SOCIETY

GIS Technical Paper Session: Current Trends, Future Plans
Wednesday, October 30, 8:00 am-9:45 am

Integration of text and image in the digital book format.

KLIMLEY, Susan, Science and Engineering Libraries, Columbia University, New York, NY 10027, klimley@columbia.edu; and FISH, Elizabeth, Library, Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY 10964, efl09@columbia.edu.

In the geology literature, the relationship between text and image is one of the most varied and complex to be found in books. Many years and much work have gone into developing a digital format to adequately preserve the oversized color maps characteristic of the literature. Efforts now focus on linking the oversized and other images into a digital surrogate for the original book. New problems have been encountered. On pages that contain text and a line drawing, digitizing techniques maximizing the appearance of the text make for poor representation of the illustration. Navigation tools for movement between text and image are untested and the options most advantageous to the reader are not always obvious. There is a great need for standardization of the digitizing process so that digital preservation is a cost effective as well as intellectually acceptable option.

Where in the world? Finding meteorological and climatological data.

RECUPERO, Lisa A., Earth and Mineral Sciences Library, Penn State University, 105 Deike Bldg., University Park, PA 16802, L2R@PSULIAS.PSU.EDU

Locating meteorological and climatological data can be an arduous task, even in today's world of electronic data repositories and the World Wide Web. This paper will look at research institutions which specialize in collecting and storing meteorological and climatological data and the needs of the information professionals who work with the data.

A survey to identify information needs and possible areas of collaboration for meteorological and climatological data storage and retrieval will be discussed. The survey attempts to identify how information professionals locate meteorological and climatological data; determine the extent and availability of historical data; look at the impact of the WWW and other electronic resources upon data storage and retrieval and lastly, identify the areas and ways in which collection managers are increasing data holdings.

The formation of a new professional association--Atmospheric Science Librarians International (ASLI) will also be discussed.

The new USGS Geologic Names Committee: Looking toward the future.

BLOME, Charles D., U.S. Geological Survey, MS 913, Box 25046, Federal Center, Denver, CO 80225; and WARDLAW, Bruce R., U.S. Geological Survey, MS 926A, 12201 Sunrise Valley Drive, National Center, Reston, VA 20192.

The Geologic Names Committee (GNC, also referred to as the Committee on Geologic Names), established in 1899, has undergone a number of changes since its inception. In the late 1800s, the committee's task was to evaluate geologic formation (and higher unit) names to determine whether they complied with rules and nomenclature adopted for Survey publications.

In 1961, three regional review-staff offices, called Geologic Names Units (GNU's), were established; they operated until the Survey's Reduction In Force and reorganization on October 15, 1995. In this reorganization, the Survey's former branches became a series of formal teams, one being the National Cooperative Geologic Mapping (NCGM) Team.

In late 1995, the Geologic Division's Chief Paleontologist became chairperson of the Survey's new GNC. Each region (Reston, Denver, and Menlo Park) now has a Geologic Names Subcommittee (GNS) composed of a chairperson selected from the NCGM Team and a member from each of the other teams. The chairperson of each regional GNS and the Chief Paleontologist form the national GNC which provides advice on broad nomenclature issues and serves as a mediator between the regional GNS and author when necessary. The responsibilities of each GNS are to review the geologic nomenclature of all manuscripts for Survey publication; review of non-Survey publications are the responsibility of the author.

Anyone can access the USGS's stratigraphic nomenclature by using the USGS Digital Data Series Compact Disk DDS-6 (Release 3, 1996) which contains the stratigraphic nomenclature databases GNULEX and GEONAMES, or by accessing the internet using the address: 'http://ncgmp.usgs.gov' and selecting 'Lexicon of Geologic

Names'. Both databases are being revamped into a single dataset that can be searched by stratigraphic unit name, as well as by age, area, author, and other keywords. This new system will be easier to update and will incorporate for the first time the entire USGS geologic names reference files.

A 1996 survey of geoscience information resources in southern Africa: Botswana, Zambia and Zimbabwe.

HANSON, Dena F., 3732 Lenox Drive, Fort Worth, TX 76107

A year-long stay in southern Africa provided the opportunity to visit geoscience libraries in Botswana, Zambia, and Zimbabwe, and to discuss the status of geoscience information access with government and academic geologists, librarians, and students. As a result of economic and bureaucratic factors in these southern African countries, the universities and geological surveys have difficulty accessing current geoscience information. Infrastructure and expense preclude access to online databases and commercial document delivery services, and funds for interlibrary loan are scarce. None of the surveys or universities in these countries currently have access to GeoRef on CD-ROM (the University of Zimbabwe Geology Department has just ordered it thanks to aid funds), and only the University of Botswana still subscribes to the printed Bibliography and Index of Geology. Organizations are generally unable to afford current journal subscriptions, new books, and reports. The majority of new publications are results of donations, aid projects, and exchange programs like that of the U.S. Geological Survey. None of the geological surveys in these three countries have access to electronic mail. While university geology departments and libraries do have access to electronic mail, access to the internet via basic tools like telnet and ftp, let alone web browsers, is not yet provided.

Improvements to southern African geoscience information access are being made possible by the French-coordinated Pan-African Network for Geological Information Systems (PANGIS) program, Canadian and European aid programs, and money from industry, targeted at providing access to international literature and dissemination of the southern African geoscience literature. However, in these three countries, where the mineral industry contributes a high proportion of the revenue, the present status of access to current geoscience information still is disproportionately poor. A coordinated program, involving African geologists as well as the information community, to donate and ship requested journal issues and publications from the west would be a valuable contribution.

The impact of the Internet on the public sector: Providing natural resource information and technology to Kansas.

CARR, Timothy R., tim_carr@msmail.kgs.ukans.edu; ADKINS-HELJESON, Dana, dana@msmail.kgs.ukans.edu; BUCHANAN, Rex C., rex@msmail.-kgs.ukans.edu; METTILLE, Thomas D. tmettille@pcmail.kgs.ukans.edu; Kansas Geological Survey, University of Kansas, Lawrence, KS.

The Kansas Geological Survey uses the Internet as an important communication channel. The Internet provides rapid, cost- effective access to natural resource data, informational sources, publications, and technology. Usage of the Survey's web server has grown dramatically. Today, the Survey is weaving the Internet into all of its ongoing and future research and public service operations.

Technology and information transfer processes are moving away from individual consultations, paper publications, and dusty files, and toward high-speed large-volume conduits for digital data and technology that better fit the wide audience of academic organizations, private and public sector entities, and individual citizens. The Internet provides flexible just-in-time accessibility to fundamental geologic and geographic data, to data compilations, and to the latest research and technical studies. Products are available on-line as they are completed, at a fraction of the time and cost of paper publication.

Publications with relational links and search engines allow users to modify the scale and focus to their particular requirements, and permit access to data in a compatible format for validation and risk analysis.

The Survey is designing research and technical products that go beyond traditional publications and take advantage of the Internet capabilities (examples include the Digital Petroleum Atlas and the Kansas GIS Core Database).

The Survey's virtual resource center provides a flexible and efficient method to disseminate data and technology, and provide geologic research to a geographically dispersed population. The Internet better enables the Survey's information and research results to serve as the framework upon which individual and public policy decisions are built.

Thesis and dissertation citations as indicators of faculty research use of university library journal collections.

ZIPP, Louise S., Collection Development Dept., Iowa State Univ. Library, 204 Parks, Ames, IA 50011, lzipp@iastate.edu.

Citation analysis is a long-standing collection evaluation

tool often undertaken to investigate one aspect of library collection use. Citations from theses and dissertations are much more easily and comprehensively gathered than are citations voluntarily supplied by faculty. Using four studies in geology and biology, the Kendall coefficient of rank correlation tests the degree of association between journals most heavily cited by graduate students and those titles most heavily cited in faculty publications. Positive associations are confirmed in three data sets. Additional descriptive analysis shows that the 40 titles most heavily cited in theses and dissertations consistently contained about 70% of the top 40 titles cited by faculty, including most of the 12- 15 top titles. If results are replicated, thesis and dissertation citations can be reliably used as a surrogate for faculty publication citations in evaluations of the research portion of library collection use.

Developing a virtual library for a geoscience clientele.

YOCUM, Patricia B., Shapiro Science Library, University of Michigan, Ann Arbor, MI 48109, pyocum@umich.edu

Rapid developments in information technology furnish many opportunities to re-think how users and information can be connected. In particular the combination of desktop computers, local and international networks, graphical browsers, and digitized content encourage creation of new ways to organize and access information in the academic setting. At the same time conventional library ways, through their long-term endurance, suggest there are underlying principles which are key to the successful support of research and teaching. An optimal approach for practical application would be to combine the best of the new possibilities with the obvious successes of existing systems.

These ideas are the formative ones which shape the development of the Virtual Geoscience Library (VGL) as an experimental service at the University of Michigan. The effort, which began in Fall 1994 and is ongoing, seeks to model and populate a virtual geoscience library customized to meet the scholarly needs of faculty and graduate students in the Department of Geological Sciences at the U of M. It also seeks to determine the value of such a service to that clientele.

The effort can be divided to date into three segments all of which continue to overlap to some degree.

The first segment concentrated on establishing; purpose, articulating assumptions and pre-conditions, projecting costs, and identifying possibilities. The second segment involved practical matters including engaging staff and users to contribute to the project, devising, and testing features, developing a prototype and addressing the sustainableness of the effort. The third segment, the most recent, focuses on deployment, that is, publicizing the availability of the VGL, teaching and encouraging use, and studying the utility and impact of the service.

This paper deals with the three segments, the formative notions which underlie them, and the principal result which is available on the World Wide Web at http://www.umich.edu/~vgl/. Comments and suggestions are encouraged.

GIS Poster Session

Tuesday, October 30, 1:30 pm-5:30 pm

Geophysical Institute's Keith B. Mather Library: Design and planning for this new facility--Opening 1998.

TRIPLEHORN, Julia H., Geophysical Institute, P.O. Box 757320, 903 Koyukuk Dr., Fairbanks, AK 99775-7320, ffjht@acad3.alaska.edu

The Keith B. Mather Library at the Geophysical Institute, University of Alaska Fairbanks will open December 1998. The library will serve the Institute research staff, and two government agencies: Fairbanks Forecast Office of the National Weather Service and the College International Observatory of the U.S. Geological Survey. An agreement has been signed for an International Arctic Research Center. Scientists from around the world will be participating in the new arctic global research center and will also be using the library facilities to support their research. This poster session will describe the design for this library with emphasis on some of the new features: self service checkout, motion sensor lighting, tables wired for lights and computers and earthquake safety considerations.

GEOSCIENCE INFORMATION SOCIETY - 2nd Quarter Financial Report - 1996

Checking accounts:

Balance from 1996 1st quarter:	
Bank of America	$20,675.57
Bank One (TX)	5,617.76
First National Bank (WY)	9,505.00
	$35,798.33

Income:

Dues - Personal	560.00
Dues - Corporate	450.00
Dues - Sustaining	100.00
Newsletter renewal	40.00
Publication sales	605.00
Interest - B of A	128.91
Interest - Bank One (TX)	3.14
Interest - 1st National (WY)	77.87
Total income	$1,964.92

Expenses:

Secretary	35.41
Election Committee	150.96
1996 Annual Meeting	380.00
Publication Manager	102.73
Newsletter	1,093.47
Refunds	45.00
Total expenses	$1,807.57

2nd quarter 1996 checking balance = $35,955.68

Savings accounts:	**Ansari funds**	**Bristol fund**
1st Quarter 1996 closing balance	$4,810.06	$ 761.36
2nd Quarter 1996 interest	18.40	3.80
2nd Quarter closing balance	$4,828.46	$ 765.16

Total in savings = $5593.62
Grand total checking and savings = $41,549.30

	Income	**Expenses**
1996 Budget	$15,205.00	$19,090.00
Through June 1996	$11,009.70	$ 5,533.19

Submitted by Sally Scott, GIS Treasurer

GIS REPRESENTATIVE REPORTS:

Cartographic Users Advisory Council [summary]

The Cartographic Users Advisory Council (CUAC) met in Washington, D.C., on May 8-10, 1996. Eleven members from six organizations (ALA/MAGERT, ALA/GODORT, GIS, NACIS, SLA/G&M Division, and WAML) were represented. Presentations and discussions with representatives of federal agencies that produce or work with spatial data occupied most of the two days. Full text of the minutes of the May 9-10, 1996 CUAC sessions are being published in the GIS Newsletter.

CUAC members were concerned that newly announced guidelines for public access work stations in Federal Depository Libraries were unrealistic for the demands of electronic spatial data. CUAC prepared guidelines for the increased hardware and software requirements necessary to utilize some of the spatial data now being distributed through the Federal Depository Library Program. These recommendations have been published in Administrative Notes, v. 17, no. 08, 6/15/96, p. 14-15.

During the meeting each CUAC member was assigned to be the contact person with the various federal agencies which produce spatial data or cartographic materials. Jim is the rep to the U.S. Geological Survey, and Rich is the rep to the Natural Resources Conservation Service (formerly Soil Conservation) and the Federal Emergency Management Agency. Please feel free to contact either GIS reps with comments or concerns. CUAC will officially meet with the various federal agencies again early next May.

Respectfully submitted,
Jim O'Donnell and Richard Spohn

Cartographic Users Advisory Council Minutes
May 9, 1996, Library of Congress, Geography and Map Division

Gary Fitzpatrick, Geographic Information Systems Specialist, started the day by taking the Council on a tour through the Center for Geographic Information. The G&M Division recognized that industry partners would be needed to help incorporate emerging technologies into existing services. The Madison Council, a Library of Congress friends group, offered a $30,000 grant to create the Center. In January of 1995 nine GIS industry leaders attended the first organizational meeting. They decided that membership in the Center would require a five thousand dollar annual contribution and appropriate donations of software, hardware and support. The Center now has twelve members and seven associate members.

The G&M Division also received funding through the National Digital Library Program (NDL), designed to preserve "core historic Americana." The G&M Division has hired four employees for the Center for Geographic Information and has identified several collections to scan for preservation including: panoramic views, land ownership maps, railroad maps, fire insurance maps, civil and revolutionary war maps and general U.S. maps. The staff of the Center are scanning the maps at 300 dpi using a color flatbed Tangent scanner. Because of the size and relative fragility of maps, the G&M Division is the only division doing in-house scanning. The scanned images are being stored on tape at the Division and will be made available via the Internet in the future. The Information Technology Service of the Library of Congress will handle the Internet display and transfer of the map images. The images are not geo-referenced. Staff of the Center consider geo-referencing an intellectual process, one which users will want to complete for themselves. The Center also has two color ink jet plotters for output. James Dyson, Automation Operations Coordinator, demonstrated the scanner and plotter for the Council. The scanned and printed maps provide a high quality, inexpensive surrogate for reference. Although the scanner can handle up to 600 dpi, the lesser resolution is more than adequate to display details, and the files are significantly smaller and therefore easier to transfer and store. At the moment the Center is unable to offer patrons the ability to manipulate the digital image. They hope to move in that direction in the future.

The G&M Division will indicate the availability of the digital image in the MARC record. For those scanned images without records, they will create smaller "reasonable" level records.

The NDL project plans call for 5 million items at the Library of Congress to be scanned. Those 5 million items are expected to require 32 terabytes of storage, of those 24 terabytes will come from the G&M Division alone.

A third aspect of the digital initiative at the G&M Division offers public access terminals for electronic mapping. Three X- Window workstations located in the Reading Room, run a variety of mapping software. The Division hopes to offer terminals and services to the Congressional Research Service in the future.

Mr Fitzpatrick emphasized that corporate partnerships and donations have allowed the G&M Division to move into digital technologies much more quickly. Incorporating all the new computing power into the Library and developing new lines of communication have been challenging.

Ralph Ehrenberg, Chief of the Geography and Map Division of the Library of Congress noted that the past

few years have seen a number of new developments for the Division. The Philip Lee Phillips Society will work with map societies on a state and regional level. The Society has 150 members at the present.

Mr Ehrenberg noted that the National Digital Library Program for Cartographic Information has secured four full time positions for scanning historic maps. They plan to scan 50 to 60 thousand maps by the turn of the century. Mr. Ehrenberg also highlighted the Center for Geographic Information and the public GIS facility.

The Library of Congress Summer map project will also be held this year.

Jim Flatness, Head, Acquisitions Unit, emphasized that LC is still acquiring maps and atlases on a world-wide basis. Approximately 120,000 items were retained last year including those exchanged with other nations. Mr. Flatness mentioned that transfers from the Department of State and the Defense Mapping Agency were high in the past year. Border changes necessitated new mapping and the agencies removed previous editions. LC retained about 30 to 40 percent of the transferred maps.

He also emphasized that not all federal agencies are complying with automatic distribution policies. Likewise, not all commercial products are deposited. The Acquisitions unit monitors both situations. The Unit purchased new maps of Russia. In addition, the Madison Council has obtained several historic maps in the past year. In addition, the Division is concentrating on collecting materials that document mapmaking, especially American maps and mapmakers.

Barbara Storey, Head, Cataloging Unit, noted that arrearages have been reduced, particularly the atlas backlog. Two staff have been added to the Cataloging Unit. Presently 13 staff catalog maps, 3 catalog atlases and 1 staff person concentrates on digital materials. The Cataloging Unit will also update records for scanned images. Further, the Unit is working with the Department of State and the Defense Mapping Agency to create MARC level cataloging for their agencies' holdings. DMA already does some in-house cataloging.

Gary Fitzpatrick added that he is a member of the Coordinating Committee of the Federal Geographic Data Committee, and that Mr. Ehrenberg is on the Steering Committee. Mr. Fitzpatrick noted that maps and other material displayed at the Environmental Systems Research Institute annual conferences are now located at LC.

Mr. Fitzpatrick and Mr. Flatness emphasized that they will need to coordinate to work toward new approaches to acquiring digital data. The GIS industry has expressed concern about archiving, a need that may be filled by recent developments at the G&M Division.

May 10, 1996, U.S. Government Printing Office

The Friday, May 10, 1996 meeting of the Cartographic Users Advisory Council opened at the Government Printing Office at 9 am. Gil Baldwin, Chief, Library Division, U.S. Government Printing Office (GPO) welcomed the Council and made some general announcements. He introduced GPO staff members attending the CUAC meeting as guests.

Mr. Baldwin chronicled for the Council the sequence of events beginning last year with the U.S. Congressional mandate that GPO identify measures necessary for a successful transition to a more electronic Federal Depository Library Program. This transition was announced and discussed at the Depository Library Council meetings in Memphis last October. Comments were solicited from the Depository Library community before a mid December draft plan was due back to Congress. A draft transition plan was published in Administrative Notes on December 29, 1995 and discussed again at the American Library Association (ALA) Midwinter meetings in San Antonio in January 1996. Comments have been solicited on each of many Task Force Reports since then.

The draft transition plan has now become the Federal Depository Library Program: Information Dissemination and Access Strategic Plan, FY 1996-FY 2001. Mr Baldwin is currently working on the final version of this plan. Currently the report includes no specific references to cartographic information. He invited and encouraged CUAC members to send comments to him before May 24, 1996, so that he can include this information in the final plan.

The current strategic plan gives us a longer time frame, until 2001, to move to an all electronic depository program. It will incorporate some of the same values in the program that we have had all along. It will place more emphasis on coordination among various players to assure long term access and archiving, i.e. the libraries, GPO, and the National Archives and Records Administration (NARA). GPO's electronic storage facility is in very early planning stages. Some other agencies have approached GPO and expressed an interest in playing a part in this.

There are changing expectations of libraries in the FDLP. The deadline for new service level requirements, i.e., Internet access is October 1, 1996. CUAC will provide Mr. Baldwin with special equipment requirements for cartographic data and mapping software.

CUAC's concern about training needs were discussed, and Mr. Baldwin asked that we provide him with language to that effect in our minimum equipment requirements document that we submit to him.

The concept of 'most appropriate format' as discussed in the Strategic Plan was discussed. Mr. Baldwin asked CUAC to submit our recommendations. But he pointed out that GPO has no ability to influence agencies and the format of the products they provide. CUAC should talk directly with the agencies about specific products.

Concern over National Archives and Records Administration (NARA) archiving cartographic data was discussed. It has been announced at the recent Federal Depository Conference that NARA would archive data that could be converted to ASCII format and that has documentation. Since this would not be appropriate for a large quantity of cartographic data there is concern that it would not be archived.

The digital version of the soil maps have been deposited at Cornell. These were not in the depository program. Mr. Baldwin pointed out that this information would have been useful back at the time they were working on the Task Reports. Denise Stephens will investigate further.

Mr. Baldwin concluded his remarks by encouraging CUAC input into the final Strategic Plan.

Ms. Robin Haun-Mohamed, Chief Depository Administration Branch, GPO announced that the cartographic products now distributed by Defense Mapping Agency (DMA) and U.S. Geological Survey (USGS) to Depository Libraries will continue. However, there have been problems in having agencies respond to the GPO study on a "more electronic federal depository library program."

Increasingly, GPO is seeing more information being issued electronically by governmental agencies. Agencies are expecting cost savings by issuing many small documents and pamphlets on CD-ROM, but publication by CD-ROM has led to cataloging problems. Digital Orthophoto Quadrangles (DOQ) and Digital Raster Graphics (DRG) are coming out quickly. Originally they were to be produced on a 1 degree by 1 degree quadrants. In response to GPO and library input, these are now issued by state. This is an example of how an agency has altered its publication plans to aid in public accessibility.

Fugitive documents are still a problem for GPO, DMA's Digital Chart of the World is a prime example. In addition, documents, once firmly within the depository program are now disappearing. National Oceanographic and Atmospheric Administration's (NOAA) Tide Tables are now available on CD-ROM for $90.00. Agencies are not required to distribute materials that fall into the category of "internal use". The Airport Obstruction Charts have been eliminated from the Depository Program for that reason.

In the transition to a more electronic depository program GPO wants to reduce/eliminate duplication of formats. If the primary dissemination of a particular piece of government information has been determined by the issuing agency to be the World Wide Web, GPO will not distribute a fiche or paper edition. Rather GPO will try to point to the web site from its own homepage. Agencies themselves have shown that they are not always seriously concerned with the archiving/preservation of information once it has been superseded or revised, nor do they think it is GPO's concern. GPO's authority is also being questioned when it comes to controlling/cataloging electronic information sites. Agency pamphlets that are used heavily by library patrons are usually the first to be posted on an Agency's web site and not printed.

Agencies often do not focus on their primary audience for this information. Information files can be huge, requiring mainframe computers. The impact on libraries and users of such products as DOQs, DRGs, and Magellan data is rarely factored in.

Ms. Haun-Mohamed is also concerned about the public/private cooperative efforts in disseminating government information. A title, for example, the Bureau of the Census' Current Population Report on Hispanic Population, has always been available to depository libraries from the agency through GPO. The agency collected the data and promised GPO copies, then said no copies would be available because it was available on the Census' web site. Ultimately a private group, the Association of Hispanic Publications, with some help from Philip Morris, Inc., took the Census data, added "value" by reformatting the data and published it under the title Hispanic-Latinos: Diverse People in a Multicultural Society. This title has been copyrighted and is available for sale. This has been happening more and more.

John Stevenson asked Ms. Haun-Mohamed about world maps from DMA not coming to GPO for cataloging, but simply distributing the World maps to depository libraries selecting these maps. Ms. Haun-Mohamed said that GPO now has copies to catalog.

Denise Stephens asked about a new edition of Landview software. Robin will check to see if a new version is available.

Melissa Lamont asked Robin for more information about a GPO/private consortium to take on the problem and responsibility of long-term storage and public access to cartographic materials.

DMA Representative, Jeanie Thackery, Chief, DMA Libraries noted that DMA is undergoing reorganization. The new Customer Service Team (led by Lt. Cmdr.Dianne Edson) is probably the most appropriate current contact for CUAC.

While no final decision has been reached, DMA is planning to be merged into a new agency, NIMA (National Imaging and Mapping Agency). Executive authoriza-

tion is pending.

On a positive note, the reorganization has put all DMA libraries under a single head (Ms. Thackery). A new move to encourage the participation of MLS librarians is hoped to enhance DMA's mostly cartographer-base libraries. 170 staff are employed.

DMA now has a WWW presence (http://www.dma.gov/) and plans to use it to broaden its accessibility.

As a producer of information, DMA is capable of emergency response activities. An example is the rapid development and distribution of the special Bosnia map. The map was key in supporting deployment of military personnel to the area.

Ms. Thackery quickly worked to find answers to the queries made by CUAC regarding the availability of the DCW (Digital Chart of the World) and other products. The following memo begins to answer some of the Council's questions concerning DMA production and distribution practices.

Date: 10 May 1996
From: LCDR Dianne Edson, USN
Defense Mapping Agency
Federal Agencies Customer Support Team
Subject: Response to CUAC Questions

1. What is the status of the revised Digital Chart of the World? Will it be distributed as part of the Depository Library Program? If not, how might it be obtained?

The revised Digital Chart of the World is called Vector Smart Map (VMAP) level 0. It will be available at the end of September. It has not been determined yet if it will be part of the Depository Library Program. It will be available for public sale through the U.S. Geological Survey at a cost of about $140 (final price will be set in July/August).

2. Has DMA developed an outlook for the future of paper publications? (Will the nautical charts, for example, continue to be distributed in paper?)

DMA is migrating toward producing a database of global geospatial information and services (GGI&S), which will ultimately be queried for specific information by each user. Eventually, a customer will get the information they want and print out the map or chart themselves at whatever scale and size they want. In the meantime, paper products will not go away for awhile.

3. With respect to electronic products, how will metadata and other useful textual information be stored/disseminated?

Vector format digital products include a "layer" or coverage that contains the metadata. The user can query a point or feature and the metadata will appear in a window. Raster format digital products will have metadata appear in a pull-down menu on request.

4. How can the Council help to promote access to both paper and electronic DMA products?

The DMA Customer Help Desk can be reached at 1-800-455-0899. This number represents a single point of contact for the general public to ask questions about DMA products and services. DMA also has a Home Page on the World Wide Web: http://www. dma.gov. The Council can disseminate this information to reach a wider audience.

5. Several products listed in the new DMA newsletter, NAVIGATOR, have not been seen by most cartographic information users. What is their availability to the public?

The NAVIGATOR listed many DMA products. We will review the list for releasibility and method of distribution and provide a consolidated response at a later date.

6. As information managers, we are concerned about the impact of proliferating electronic publications on general access. As a distribution agency, has DMA formulated a vision of this issue?

As a Combat Support Agency, DMA's primary mission is to provide GGI&S to Department of Defense activities. Any time the public can "bonus off" products we make for the military, we are directed to make those products available. This is subject to classification and release issues. Public sales of our products are handled, by signed Memoranda of Understanding, by the National Ocean Service for aeronautical and nautical products and by USGS for topographic products. We are currently working on agreements with each of these agencies to handle the public sale of digital products once they become available in large quantities. Please address any questions you may have concerning these matters to LCDR Dianne Edson, USN, DMA/OGCF, at (703) 275-5749 or via email at EdsonD@dma.gov.

Regarding DCW, it has been renamed Vector Smart Map (VMAP), Level 0. It's depository status is undetermined at this time. It will, however, be sold at $140.00 by

USGS and release is expected in September 1996.

The JOG (Joint Operational Graphics) remains in limbo. This title is jointly produced with the cooperation of foreign governments (scale 1:250,000). Efforts to determine its status will be made.

Efforts will also be made to determine the status of the 1:250,000-scale PAIGH map series (Pan American Institute for Geography and History).

Awareness of the NAVIGATOR, the new DMA newsletter is not wide among federal information distributors. Its listing of several generally unknown DMA electronic titles has generated questions about availability for general public distribution. This list also includes the former DCW (now Vector Smart Map, or VMAP). We have been promised follow up on our request for information about these items.

Eliot J. Christian, Chief, Data and Information Management, Information Systems Division, U.S. Geological Survey discussed the history and structure of the Government Information Locator Service (GILS). GILS is an Internet locator and a standard for searchable records. GILS records identify public information resources within the Federal Government, describe the information available in these resources, and assist in obtaining the information. They serve as a label to point to the location of information on the Internet. Record production is decentralized at the product development level with a fair amount of openness that does not constrain the way the information is managed or presented and does not constrain how the locator record is structured. The search protocol is key to allowing queries for the various data products across agencies and networks and obtaining reliable results. The flexibility of the GILS standard has precipitated its adoption on the international level with Canada (http://www.access.gpo.gov/su_docs/gils/gils.htm), Australia (http://kaos.erin.gov.au/general/gils/erin_gils.html), the United Kingdom and Japan adopting GILS along with U.S. federal and state agencies complying at some level.

GILS is available from the GPO Access Home Page or directly at http://www.access.gpo.gov/su_docs/gils/gils.html).

Mr. Billy Tolar, Federal Geographic Data Committee noted that two of the major activities of the FGDC in implementing the National Spatial Data Infrastructure, which is intended to bring spatial data producers and users together, are the creation of standards and a spatial data clearinghouse. For our discussion Mr. Tolar concentrated on the FGDC Metadata Standard, which documents spatial data sets.

A simple definition of metadata is that information you want to know about someone else's data. Metadata is the information that make data useful to others. It describes the content, quality, condition and other characteristics of data. Uses of metadata include organizing and maintaining databases, providing information to data catalogs and clearinghouses, and providing information to aid data transfer. What it does not do is provide a means to organize information in a computer system, prescribe the method of transfer, or dictate how the data are presented to the user.

The FGDC has developed Content Standards for Digital Geospatial Metadata Workbook. Mr. Tolar suggests that the Workbook version of the standard is perhaps easiest to use and to comprehend. The standards have been in use for 2 years and are up for review. Mr. Tolar would like to get input from the library community. The standards as well as Mr. Tolar's presentation are available at the following URL = http://www.fgdc.gov

The FGDC is also looking for additional nodes on the Clearinghouse. The Clearinghouse function of the FGDC provides a distributed network of geospatial data producers, managers, and users linked electronically. For more information and software see the FGDC website.

Hedy Rossemissl is the National Mapping Division's new Senior Program Advisor for Data and Information Delivery, replacing Gary North, who has retired. She presented an overview of USGS's web pages (USGS estimates that there are 100,000 agency pages up), indicating that USGS is treating the web as "virtual storefront" or sales points for information. She mentioned that National Water Data Conditions, previously published in an abridged format on a monthly basis, is now available complete on the web as is the Geographic Names Information System (GNIS). She was unaware about how this information is being archived.

The U.S. Biological Survey has been absorbed into USGS, and constitutes a Biological Division within the Survey.

It was suggested that Depository Libraries should be included as a link on web pages that describe access to USGS products, along with sales information. USGS is discussing print-on-demand capabilities with 3M; it is hoped that this discussion will result in low cost efficient printing in large format from digital products. When asked what "low-cost" meant, Ms. Rossmeisl replied "under $5,000" for a plotter.

The indexes and map inventory will be online soon.

When asked whether, with all this digital emphasis, there was any focus on paper, Ms. Rossmeisl replied that USGS was still planning to support the paper products. She said that 7.5-minute topographic series quadrangles would continue, and that DRGs will NOT be the only way

libraries will receive data.

DRGs are considered to be a one-shot deal USGS has made no plans for updating them. All of them will be available on the Internet within a year. The CD-ROM will, it is hoped, be distributed completely by then also. It is recognized that current DRGs are fine for backdrops, but not necessarily the best resolution for print-on-demand or GIS manipulation.

The Global Land Information System (GLIS) includes access to indexing of Landsat data, including online ordering capabilities.

The question of quad name changes that are reflected on indexes but for which no map has yet been produced was raised but not answered.

The status of Professional Paper 1200 and the currency of GNIS updating were raised as topics, but not answered. Jim O'Donnell will continue to work on both questions.

It was proposed that CUAC take a position on paper and digital accessibility. CUAC discussed dual format distribution for the near future. Many libraries cannot afford the computer and printing equipment necessary to handle large data sets such as the DRGs. Paper distribution through the DLP and web access to digital formats may circumvent the strict interpretation of dual distribution.

USGS plans to make all of its data available for free in the Spatial Data Transfer Standard (SDTS), and to charge for data in other formats (such as ARC/INFO). Digital Elevation Models are on track to be available/ distributed in this way. A request was made that Alaska and Antarctica indexes be updated. Currently there is no index to Alaska 7.5' quads.

Joel Morrison, Chief, Geography Division, U.S. Bureau of the Census, addressed issues dealing with the move to increased use of electronic formats and the elimination of most published reports. Planning is well under way for Census 2000, so questions or concerns should be directed to the Bureau of the Census as soon as possible.

For Census 2000, the Bureau of the Census proposes to:

+ Make every effort--from simpler, user-friendly forms to the design of field operations--to count every household.
+ Implement an open process that diverse groups and interests can understand and support.
+ Eliminate the "differential undercount" of racial and ethnic groups.
+ Produce a "one-number census" that is right the first time and that unites us as a Nation rather than dividing us as litigants.

Among the strategies to achieve these goals:

+ Build partnerships
+ Keep it simple
+ Use technology intelligently
+ Use statistical methods

Data collected in Census 2000 will be designed to display with the appropriate map so that users will be able to easily locate Census geographical units. Census 2000 could be the last attempt to count every person in the country as part of a snapshot. Population counts may become obsolete. The American Community Survey, beginning in 1999, will replace the long form questions of the decennial census by using sample data. Redistricting by 2010 might be compiled by the Bureau based on the administrative records of a variety of agencies.

Census will compare the 120,000,000 addresses in its master file with local governments' lists before the counts are made. About 39,000 local jurisdictions were sent requests to update their data. For Census 2000, the Bureau will initiate a new strategy: instead of controlling the number of forms to prevent duplicate counting, the country will be blanketed with forms, e.g., forms mailed to residences and distributed in malls. Statistical methods will be used to eliminate duplicate responses. Completed paper forms will be handled once, scanned, shredded, and destroyed, and images will be stored. Forms will be collected in localities until 90% have responded and an additional 9% will be extrapolated from follow up survey results. Postcards will be sent to all addresses notifying the residents of the form to come. Following the form, another postcard will be sent as a reminder. If there is no response, a second form may be sent and the resident reminded by telephone. The idea is to greatly reduce the need for enumerators in the field.

Census has sought input from data users, who have strongly urged the Bureau to make historical data accessible online for comparison purposes. The Bureau acknowledges that many users want to compare data from several decennial censuses (e.g., 1980- 2000) and to this, access to at least twenty years of historical data will be required. The Bureau will separate its collection and tabulation functions. This separation is intended to facilitate cost-efficient data collection and to make comparable tabulations possible.

Census is employing technology to improve its work. Database models, e.g., TIGER/line files, will gradually improved through use of Global Positioning System (GPS) technology. Not every address will be plotted using GPS for Census 2000 as there is no budget to upgrade the TIGER. TIGER/line files will be updated as the collateral effect of other data collection efforts. The Bureau is working to design second and third generation database models and sees TIGER as a 1980s database built on 1970s concepts. Census sees promise in its prototype

ORACLE relational database, which might be easy to use with GIS programs such as ArcInfo. Census is working to make its own internal database object oriented while protecting confidential information with a firewall.

Many familiar printed reports will be eliminated in favor of low cost or free customized reports. Updates may be entered as other data is gathered as a collateral effect. It has been announced that Census 2000 will only be available electronically, but it is possible that there may be a few printed reports. Data will be made available through the Data Access and Dissemination System (DADS). Mr. Morrison indicated that one concept in development would allow users to draw a polygon and to get demographics for the area described.

Census 2000 will allow separate tabulations. For example, Indian nations whose territory crosses state lines will receive tabulation for their entire area and will not have to add values for the various states as in the past. Census 2000 will be distributed in pre-defined products, simple user-defined products, and complex user-defined products. Census plans to make available a retail products CD-ROM containing 1990 Census data and software for under $100 to encourage users to learn simple mapping techniques. Later, these users might download data from the Internet.

Other points mentioned by Mr. Morrison include the use of the Internet for a variety of tasks, including promotion, market research, custom product generation, and online ordering (among others). Geography will be the integrating factor, and confidential personal data will be protected. The Bureau of the Census is concerned with data integrity, metadata, documentation, and standards. The Bureau is responsible for gathering data used by other federal agencies, and has an interest in cost recovery.

Fred Anderson, Chief of the Distribution Division of National Ocean Survey was the last presenter of the day. He was accompanied by Sharon Kemp, Chief of the Inventory Management Group, which is responsible for providing NOS products to GPO for distribution to depository libraries. Mr. Anderson described the organization of the National Ocean Survey (NOS) and possible future changes. These may include moving aeronautical charting to the Federal Aviation Administration (FAA) and combining the Coast Survey and the National Geodetic Survey as a quasi- governmental corporation. If aeronautical charting is not moved to the FAA, it would be added to the corporation. Noting the size and complexity of the National Oceanographic and Atmospheric Administration (NOAA) and the number of products released by various sections of the agency, Mr. Anderson suggested that CUAC develop additional contacts within the NOAA.

Carol Beaver, Director of the Office of Aeronautical Charting and Cartographic, has retired. Terry Faydon, Captain in the NOAA Corps is acting Director.

The following items have been discontinued from the Depository Library Program:

Airport Obstruction Charts and Obstruction Data Sheets. (Item 0192-A-02) These charts that were produced for the FAA and NOS received a waiver to discontinue them from the Depository Library Program as a cost saving measure.

Tide and Tidal Current Tables (Items 0190-91, 0196-99). These have been cut due to a halt in funding. NOS is producing a $90 CD-ROM with the data in post-script format. This has been purchased by two commercial firms who are publishing books to replace the NOS publications. NOS is also providing 3 day tide information on the World Wide Web.

Bathymetric Map Products (Item 0191-B-17). These were discontinued due to lack of funding. They will be reproduced and sold by the national Geophysical Data Center.

New Items in the Depository Library Program: Atlanta Olympics Helicopter Route Chart (Item 0192-A-14). After the Olympics, a new edition will be produced without the Olympics information.

Dallas-Fort Worth Helicopter Route Chart (Item 0192-A-14). Planned for October 1996.

Aeronautical Chart User's Guide (Item 0192-B). Shipped about a year ago.

NOS Catalogs of DMA Nautical Products (Item 0378 -E-11). 9 volumes of DMA Nautical Products available for public sale from NOS.

NOS Catalog of DMA Aeronautical Products (Item 0378-E-08). DMA Aeronautical products available for public sale from NOS.

Changes to the items in the Depository Library Program:

IFR/VFR Low Altitude Planning Chart (Item 0192-A-08). Replaces IFR/VFR Wall Planning Chart and the Flight Case Planning Chart.

U.S. Terminal Procedures Publications. Effective with the April 25, 1996 edition, this will be published in both loose-leaf and glue bound editions. The Depository Libra ries will receive the glue bound edition.

The two day Cartographic Users Advisory Council meeting went beyond the discussions with representatives of map producing agencies. In the course of the meeting, CUAC members prepared guidelines for the increased hardware and software requirements necessary to utilize some of the spatial data now being distributed through the Federal Depository Library Program. CUAC members were concerned that the newly announced guidelines for

public access work stations in Federal Depository Libraries were unrealistic for the demands of electronic spatial data. CUAC's recommendations, compiled by members Donna Koepp and Melissa Lamont, were sent to Gill Baldwin, Chief, Library Division, U.S. Government Printing Office (GPO) and have since been published in the Administrative Notes, the Federal Depository Library Program's newsletter, as "Spatial Data Supplement to Recommended Minimum Specifications for Public Access Work Stations in Federal Depository Libraries." (Administrative Notes, v. 17, no. 8, 06/15/96, p. 14-15.)

Respectfully submitted,
Jim O'Donnell and Richard Spohn, GIS Representatives

Western Association of Map Libraries, Minutes, April 17-20, Eureka, Calif.

The WAML Spring Meeting was held April 17-20 in Eureka/Arcata, CA. The meeting was organized by Bob Sathrum from Humboldt State University. An excellent program included a paper by David Best on a cooperative approach to development, maintenance and distribution of geographic data. A unique presentation by Dr. Paul Blank allowed conference participants to walk across Europe and Asia in a large auditorium as part of "Using Defense Mapping Agency Maps for Geographic Education". A field trip to Redwood National Park and Prairie Creek State Park was part of the activities.

At the business meeting Larry Cruse noted that the WAML homepage is up. The focus of the homepage will be on "tools of the trade" for acquisitions, cataloging and reference, as well as information about WAML activities and publications. The URL is http://gort.ucsd.edu/mw/waml/waml.html. Another issue brought up was concern about net loss of membership of WAML and many other small specialized societies as organizations downsize and people assume a broader range of duties as a part of their jobs.

Janet Collins moderated an open forum on GIS Service Levels in Libraries. Results of her survey brought out some of the frustrations of librarians, particularly the problems of the time needed to learn and keep up with new technology and questions as to what do you give up if you take on more GIS responsibilities. Mary Larsgaard offered WAML members use of the facilities at MIL at U.C. Santa Barbara to learn GIS software during the summer months. Week long sessions would allow librarians to work with GIS software using their tutorials with limited assistance from the MIL staff. The only cost involved would be the librarian's time off from their own job and living expenses.

The WAML 1996 Fall Meeting will be held September 11-14 at the University of Washington in Seattle. Contact Kathryn Womble for more information. In 1997 the Spring Meeting will be held in Phoenix, AZ in mid April. The 30th anniversary Fall Meeting will be in Pasadena, CA.

Respectfully submitted,
Richard Spohn, GIS Representive

MAGERT Liaison report

The American Library Association met in New York City in July. The new MAGERT officers are Karl Longstreth (Vice-Chair/ Chair-Elect) and Steven Rogers (Treasurer). Melissa Lamont is the new Chair, Margaret Brill is Past-Chair, and John Stevenson continues as Secretary.

The winner of the 1996 MAGERT Honors Award is Robert Karrow of the Newberry Library for his dedicated service to the profession. Bob is a founding member of MAGERT.

Meridian is about ready to get back on its publication schedule. Beginning in January 1997, it should be back on a regular schedule. David Cobb is the new Editor, Brent Allison the Assistant Editor, and Alice Hudson the Advertising Manager. The long-awaited *Meridian* 10 has been mailed.

A new edition of the *Guide to U.S. Map Resources* is in the works. A proposal has been sent to ALA Publishing. It will probably have a 1998 imprint.

A motion was passed by the Executive Board regarding the establishment of a MAGERT homepage on the Web.

At the General Business Meeting, there was a presentation by Fred Anderson of the National Oceanic and Atmospheric Administration's National Oceanic Survey. He discussed various NOAA map products and the impact of recent reorganizations within NOAA on the various series.

Respectfully submitted,
Nan Butkovich, GIS Representative

NORDGEOINFO meeting, minutes, January 9, 1996, Turku/Abo, Finland

reported by: Caj Kortman (Caj.Kortman@gsf.fi),
submitted by: Tore Torngren

The second meeting of Nordic geoscience information specialists and geolibrarians, NordGeoInfo, was arranged in connection with the 22nd Nordic Geological Winter

Meeting in Turku/Abo, Finland, January 9th, 1996. The meeting was attended by 20 participants (Finland 8, Sweden 7, Denmark 3 and Norway 2). The first meeting had been held at GeoInfo V in Prague, June 1994.

The activities within the field of geoscience information at the geological surveys of the Nordic countries were presented at the meeting. Caj Kortman of the Geological Survey of Finland opened the meeting, and gave an overview of the data bases produced by the Information Bureau at the Geological Survey of Finland (GSF). The databases cover, in addition to conventional bibliographic references to publications (FINGEO) and archival reports, also library holdings, museum and drill core samples, and photographic collections, as well as information about ongoing research and factual databases at GSF. Abstracts of the latest GSF publications are on Internet (http://www.gsf.fi/info/).

Martin Ostling presented the plans for the www pages of the library of the Geological Survey of Sweden (SGU). The pages will include information about the library, databases, periodicals and collections (http://www.sgu.se/library/Library_s.shtml). The Swedish reference database GeoRegister was presented by Arne Sundberg from SGU. GeoRegister contains references to published (60%) and unpublished material (40%). It will be available on the Internet later in 1996.

The www pages of the Geological Survey of Norway (NGU) was presented by Grete Henriksen. The pages include links to NGU databases, indexes to geological maps, serials list and new aquisitions (http://www.ngu.no/test1/home/tilbud.html). Searches in the reference database can be done though the www.

In Denmark the Geological Survey of Denmark (DGU) and the Geological Survey of Greenland (GGU) were in 1995 combined into the Geological Survey of Denmark and Greenland (GEUS). The effect of the fusion on the library was described by Dorrit Korinth Jeppesen from the GEUS library. The database THOR containing references to Danish geological literature is under development.

A study on the Swedish network of geoscience libraries was presented by Tore Torngren from the Geolibrary at Lund University. He also gave a presentation of the project "Electronic library for geoscience in Sweden". The purpose of the project is to build up a logical structure for electronic geoinformation in form of hypertext documents to be published on a www server (http://www.ub2.lu.se/~geobib/ebproj.htm).

The second printed version of the IUGS/COGEOINFO Multilingual Thesaurus of Geosciences (MT) was published in 1995. The structure of the database, which includes 5823 indexing terms in eight languages was presented by Caj Kortman. The possibilities of adding Swedish terms to the MT was discussed. This could form a basis for a Swedish standard indexing vocabulary.

A report from the Geoscience Information Society Meeting in New Orleans in November 1995 was given by Pending Iselidh from SGU.

Visits to the geolibraries of the Turku University and the Abo Academy were arranged in connection with the NordGeoInfo meeting.

The next NordGeoInfo meeting will be held in connection with the 23rd Nordic Geological Winter Meeting in Arhus, Denmark, January 1998.

INTERNET RESOURCES

with contributions from:

Lois Heiser <heiser@indiana.edu>; Phil Hoehn <phoehn@library.berkeley.edu>; John Lambertson <john_lambertson@MAIL.FWS.GOV>

* Version 2.0 of the *Dictionary of Abbreviations and Acronyms in Geographic Information Systems, Cartography, and Remote Sensing*, by Philip Hoehn and Mary Larsgaard has just been mounted. The new edition incorporates about 400 additions and changes. The URL is still: http://www.lib.berkeley.edu/EART/abbrev.html

* The new home page for the Indiana University Geology Library is: http://www.indiana.edu/~libgeol

* The U.S. Fish and Wildlife Service has launched two new World Wide Web servers:
1. Alaska Region (Region 7) at http://www.fws.gov/~r7hpirm/
2. Walnut Creek National Wildlife Refuge at http://www.fws.gov/~r3pao/wnthom.html

These sites can also be accessed through the U.S. Fish and Wildlife Service Home Page at http://www.fws.gov/

* There is a comprehensive list of web sites etc. concerning the physical aspects of the Quaternary period and all sites pertaining to earth sciences at http://www.geog.ualberta.ca/kholden/quat.htm The list is still relatively small but contains links relating to Glaciology, Societies, associations and groups, Academic departments, institutions and centers, Journals, newsletters and listservers, Remote sensing, Arid, Tropical, and Polar region studies, Palynology, Paleoclimatology, Paleobotany, Dendrochronology, and Radiocarbon Dating.

GEOSCIENCE SERIAL PRICES

This is the final list for 1996. Previous lists were published in the December 1995, February 1996, and April 1996 GIS Newsletter issues.

Prices may differ, depending on the subscription source and the time the subscription was entered. Serials are included in these price lists if they fit two criteria: 1) The subject fits broadly into the geosciences; and 2) sufficient price information is available.

Michael M. Noga, GIS Collection Development Issues Committee

TITLE	PRICE ($) 1993	1994	1995	1996
Annals of Glaciology	255	228	243	266
Carbonates and Evaporites	52	50	52	54
Economic Geology	112	132	132	132
European Journal of Mineralogy	382	293	328	392
Fluid Inclusion Research	32	32	32	32
Geolog	13	15	15	15
Ground Water Monitoring & Remediation	30	30	35	53
Holocene	225	275	316	349
Hydrological Sciences Journal	160	160	160	170
International Geology Review	789	849	889	949
Journal of Geology	78	78	78	86
Journal of Hydrology	2349	2309	2495	3147
Journal of Marine Research	80	90	90	100
Journal of Petroleum Geology	264	280	294	294
Journal of Quarternary Science	255	295	345	495
Journal of Vertebrate Paleontology	85	85	85	125
Nautilus	40	40	45	45
Northeastern Geology and Environmental Sciences	40	52	52	58
Oil & Gas Journal	120	127	135	145
Palaeontological Journal	596	660	894	985
Schweizerische Mineralogische und Petrol Mitt.	164	178	199	188

Average price change for 1995/1996 (for all 4 lists, 200 titles) = 20.4%

JOB ANNOUNCEMENTS

DIRECTOR OF LIBRARIES AND INFORMATION TECHNOLOGY, University of Alaska, Fairbanks, AK

The University of Alaska Fairbanks invites applications for the position of Director of Libraries and Information Technology. The Elmer E. Rasmuson Division of Libraries and Division of Computing and Communications encompasses library services, academic and administrative computing, telecommunications, media services, extensive off-campus library services, and provides advisory support for UAF rural campus libraries and computing. Rasmuson plays a significant collaborative role in statewide planning and the development of information services. The director reports to the Provost, is the primary advocate for information technology, and is a member of the Provost's Council and other policy setting bodies.

Established in 1917, the University of Alaska Fairbanks is a land-, sea-, and space grant institution and one of three main campuses in the University system. It is a Carnegie Doctoral II institution, and is the major research center for Alaska. UAF offers instructional programs covering a broad postsecondary spectrum.

Rasmuson is Alaska's largest library with holdings of more than 1.75 million items. The University of Alaska statewide VTLS catalog provides access to over 5.5 million items, and is maintained by the Rasmuson Division of Computing and Communications. UAF operates in a distributed computing environment with a mix of operating systems and hardware platforms.

We seek candidates with a graduate degree in library or information science from an ALA accredited, or equivalent foreign accredited program. An additional advanced degree is preferred. Candidates should have a demonstrated record of research and publication and professional activities appropriate to faculty rank. Candidates should have a substantive record of successful, progressively responsible administrative and fiscal experience in an academic/research library or computing services. Demonstrated experience as a librarian in an academic/research library, operational experience with integrated library systems, and networked information technologies is expected. Operational experience with computing including academic, administrative, and network services should be demonstrated. The director will be expected to possess excellent communication skills and an ability to act as an advocate and spokesperson. We seek candidates with an understanding of issues affecting libraries, computing and their relationships with higher education.

The position, Director of Libraries and Information Technology, offers a highly competitive salary and benefits package.

Application Deadline: First consideration will be given to applications received by Friday October 11, 1996.

Application Procedure: Applications should include a letter of interest, curriculum vita, and the names, phone numbers, addresses, and e-mail addresses of three professional references to:

Dr. Robert White, Chair
Search Committee for Director of Libraries and Information Technology
c/o Rasmuson Library Business Office
Attn: Irma Jean Zito
University of Alaska Fairbanks
Fairbanks, Alaska 99775-6800

To Contact Dr. White: Telephone: (907) 474-7648; Fax: (907) 474-6967; E-mail: ffrgw@aurora.alaska.edu

A full position description is available upon request and at the UAF web site: http://www.uaf.alaska.edu/Library/announcements/

The University of Alaska Fairbanks is an equal employment opportunity/affirmative action employer and educational institution. Your application for employment with the University of Alaska is subject to public disclosure under the Alaska Public Records Act.

MAP LIBRARIAN, Branner Earth Sciences Library and Map Collections, Stanford University, Stanford, Calif.

Associate Librarian. Associate rank: $37,008 - 47,028

Stanford University is seeking an experienced librarian with an academic research library background for the position of Map Librarian Branner Earth Sciences Library and Map Collections, September 1, 1996.

The Libraries are seeking someone with academic background in one of the geographic or physical sciences disciplines to administer, set policy, and manage the map collections. S/he serves as liaison to faculty, students and staff for spatial and geographic data needs in all formats, is responsible for reference service for maps, spatial data and Earth Sciences (geology, geophysics, applied earth sciences, petroleum engineering, and integrated environmental system studies) to insure that library services adequately support research and teaching programs. S/he also is responsible for collection development, acquisitions, and cataloging of cartographic information, and supervising map collection staff. The Map Librarian also participates in the work of the Science and Engineering Resource Group. The Map Librarian coordinates work with technical services units and also participates in library-wide planning, and sits on library and university committees as appropriate.

QUALIFICATIONS: A bachelor's degree in a physical science, related geographic science or social science discipline is required; a relevant graduate degree is preferred. An MLS degree from an accredited graduate school is preferred, though Stanford will accept the demonstrated equivalent in training and experience. Extensive understanding of computer systems and demonstrated ability with GIS use and implementation is required. Adequate knowledge of current cartographic practice for advanced use of map products required. Knowledge of cartographic collection development practices, and demonstrated ability in effective access to sources of cartographic, aerial photo, satellite imagery and other spatial & geographicinformation sources in all formats. Demonstrated ability to communicate and work effectively with faculty, students and library staff is required. Experience and skills in cross-cultural communication is strongly desired.

The position reports to the Head of the Branner Earth Sciences Library.

BACKGROUND: Stanford University is a private educational institution with an emphasis on research and a strong commitment to excellence. The libraries of Stanford include the Stanford University Libraries system, and five coordinate libraries of professional schools and institutes at Stanford. The University Libraries system (SUL) consists of a main research library (Green Library), the instructional & media center (Meyer Library), and ten research branch libraries serving sciences, technology, social sciences and humanities programs. The coordinate libraries serve the law, business, medicine, high-energy physics (SLAC) and Hoover Institute communities connected to Stanford University. SUL is closely affiliated with the Academic Instruction Services (AIR) at Stanford University.

The Map Collections at Branner Earth Sciences Library serve all schools, programs and institutes at Stanford. The strengths of the collections are earth sciences (especially western U.S. geology; seismology, orogeny, oredeposits, and petroleum resources); west European nations and African nations. Areas of growing strength are GIS, computerized map resources and library services for a study/research level electronic map collection.The Map Librarian at Branner Library participates in developing and coordinating library services with colleagues in SUL/AIR and with map librarian organizations in California and the western United States.

APPLICATIONS: A letter of application, resume, and the names, email addresses, addresses, and telephone numbers of three references should be submitted to: Charlotte Derksen (cderksen@marine.stanford.edu), Chair -Search Committee, Map Librarian, Branner Earth Sciences Library, Mitchell Building, STANFORD UNIVERSITY Stanford, CA 94305-2174. (FAX: 415 725 2534). Review of applications will begin on August 1, 1996, with an offer made as soon as possible thereafter. A full position description can be obtained from Charlotte Derksen (cderksen@marine.stanford.edu or fax 415 725 2534). Stanford is committed to the principles of diversity and encourages applications from women, members of ethnic minorities, and individuals with disabilities.

ENGINEERING LIBRARIAN (temporary), University of California Riverside, CA

Assistant Librarian I - Associate Librarian IV, $29,976 - $43,032

Position Available Immediately. 18-month appointment with possibility of extension, depending upon funds available.

Position Description: This new position, reporting to the Head of Information Services in the Sciences Division, provides on-site reference and information services and acts as liaison to the faculty, staff and students of the College of Engineering. Responsibilities include:

-- Instructing individual and small groups of faculty, staff, and students to do their own searching of databases, library catalogs, full-text sources, and other information available electronically or in other formats.

-- Teaching information access strategies to students in support of coursework and student design projects.

-- Facilitating access to information resources on and off campus.

-- Advising on special projects, such as setting up image databases or indexing in-house collections of documents.

-- Selecting library materials for Engineering disciplines, including print, electronic, and Internet resources.

-- Participating in reference service in the Science Libraries; some evening and weekend hours may be required.

Qualifications. Required: Graduate degree in Library Science. Experience with print and electronic information sources and services; experience in the use of the Internet and microcomputers for information retrieval and management; strong grasp of the current state of information technology; understanding of the information needs of engineers and scientists; strong interpersonal skills. Preferred: Engineering or physical sciences degree. Experience in materials selection in a science discipline. Public service/experience in an engineering or science environment.

Reference Working Environment. Library: The Sciences Division, a unit of the University Library, is composed of the Physical Sciences and the Bio-Agricultural Libraries. At present the Division has a total of 7

librarians and 15 support staff. Construction has begun on a new unified Science Library, with completion date scheduled for 1998. College of Engineering: Established in 1989, the Marlan and Rosemary Bournes College of Engineering offers graduate and undergraduate degrees in Computer Science and undergraduate degrees in Chemical, Electrical, Environmental, and Mechanical Engineering. The College also supports several research organizations, such as the Center for Environmental Research and Technology (CE-CERT) and the Visualization and Intelligent Systems Laboratory. The College of Engineering is located in Bournes Hall, a state-of-the-art building dedicated in 1994.

Library Environment: The University Library is a member of the Association of Research Libraries. Its collections include 1.7 million volumes and 13,500 current serials housed in five libraries as well as a full complement of electronic information resources. The Bio-Agricultural and Physical Sciences Libraries serve the College of Natural and Agricultural Sciences and the College of Engineering. Other Libraries are the Rivera Library (Humanities and Social Sciences), the Music Library and the Media Library.

Campus and Community Environment: Located 60 miles east of Los Angeles and 50 miles west of Palm Springs, the 1,200 acre park-like campus is often cited for its natural beauty. The campus is experiencing a growth boom under a vigorous campus administration which is committed to Library excellence. Over 500 faculty members teach and advise UCR's student body of 9,000 undergraduate, graduate, and professional students. UCR is a land grant campus, and its many specialized centers and institutes such as the Institute of Geophysics and Planetary Physics, CE-CERT (College of Engineering Center for Environmental Research and Technology), and the Statewide Air Pollution Research Center contribute to a dynamic scientific and research environment. Riverside (pop. 250,000) and the surrounding communities of Southern California offer a variety of cultural, intellectual, and recreational activities. The community has always enthusiastically supported and encouraged the growth and development of the campus. Riverside enjoys a moderate cost of living and offers one of the best housing values in California.

Representation: This position is represented by the University Federation of Librarians, AFT, the University of California's collective bargaining agent.

Appointment: The successful candidate will be appointed to the Librarian Series, at the salary level appropriate to the candidate's qualifications and experience. Librarians are academic appointees and accrue vacation at the rate of two days per month and sick leave at the rate of one day per month. The University offers a broad range of benefits. This is a temporary position, not eligible for participation in the University retirement system.

Applications: The position is open until filled. Screening will begin June 28, 1996. Send a letter of application, a complete resume, and the names, addresses, and phone numbers of three references to:

John W. Tanno, Associate University Librarian
University of California
P.O. Box 5900
Riverside, CA 92517

For further information or to arrange an informal visit, feel free to contact John Tanno or Charlene Baldwin by phone at (909) 787-3221 or by E-mail at john.tanno@ucr.edu or charlene.baldwin@ucr. edu

The University of California is an affirmative action/equal opportunity employer.

COLLECTION DEVELOPMENT SPECIALIST, Albert R. Mann Library, Cornell University, Ithaca, NY

Albert R. Mann Library provides innovative information services for the 21st century and its staff has a reputation for research and publishing to advance the theory and practice of librarianship. The library has achieved national renown for its working electronic library and the Mann Library Gateway, and for its groundbreaking collection development efforts, its preservation program, and its innovative use of staff.

The Albert R. Mann library is looking for an adventurous individual interested in the new set of questions associated with building a contemporary research library. We will provide an environment in which such an individual can become a specialist in evaluating and selecting both print and electronic resources, with an emphasis on networked resources. In addition, this person will be given the opportunity to become a specialist for numeric/spatial data: identifying, evaluating and selecting statistical and geographic-based information. As part of a team of specialists, will extend the principles and practices of building a research library collection to incorporate print and electronic resources into a cohesive library collection. Participates in the library's research and development efforts through a variety of professional activities.

Interested applicants from outside the world of librarianship and librarians with little or no professional library experience are welcome to apply. We are looking for potential to grow into the job as much as for previous experience. We seek, for example, characteristics such as strong resonance with the phenomenon of network publishing, commitment to the role of librarians in the

academy and in delivering scholarly information, and/or talent for the analysis and organization of information resources.

Qualifications:

Required: MLS or equivalent graduate degree. Competence in the use of computing and telecommunications technology related to libraries and potential for rapidly learning the requirements of numeric/spatial data files. Excellent interpersonal, and written and oral communication skills; keen analytical ability; subject background and/or work experience in agriculture, biology, or social sciences.

Desirable: Experience in library collection development, including selection of electronic resources and ability to work with faculty. Working knowledge of one or more foreign languages. Interest in numeric data and/or geographic information systems.

Salary negotiable.

For more information, contact: Sam Demas, Head, Collection Development and Preservation, Albert R. Mann Library, Cornell University, Ithaca, N.Y. 14853-4301

Closing Date: Applications accepted until the position is filled. Please send cover letter, resume, and the names, addresses and phone numbers of three references to:

Ann Dyckman, Director, Library Human Resources
201 Olin Library
Cornell University
Ithaca, N.Y. 14853-5301

DOCUMENTS & MAPS REFERENCE LIBRARIAN AND BIBLIOGRAPHER, University of Northern Iowa, Cedar Falls, IA

Provides documents and maps and general reference, instructional, and collection management services to University students, faculty, and staff in a general reference setting. Promotes use of documents and maps collections to internal and external constituencies. Serves as principal contact for U.S. and Iowa documents depository programs. Coordinates electronic access to federal and state documents collections. Develops and maintains Library's GIS mapping capabilities. Serves as liaison with Acquisitions and Cataloging departments which handle all technical processing of documents. Responsible for collection management, promotion of library services, and specialized instruction related to programs in selected academic departments. Generally scheduled at the reference desk one evening a week and on weekends in rotation.

Required: ALA-accredited MLS or international equivalent; two or more years of professional library public services experience; demonstrated broad knowledge of and experience with U.S. documents; demonstrated experience with electronic documents resources; demonstrated commitment to public services; demonstrated strong written and oral communication skills.

Preferred: Public services experience in academic library. Work in depository library; familiarity with online documents environment; demonstrated interest and experience with map collections and GIS; academic degree in the social sciences.

Salary: $29,000 - $34,000 with comprehensive benefits including TIAA/CREF. Rank commensurate with credentials and experience. Full-time, tenure-track position.

The University of Northern Iowa, with an enrollment of 12,500 students, is one of Iowa's three state universities. UNI is located in a metropolitan area of 125,000. The Cedar Falls/Waterloo Communities are the commercial, cultural, and political hub of northeastern Iowa, and offer a very affordable cost of living. The Rod Library has a collection of 785,000 volumes, 719,000 microforms, 518,000 documents, 41,000 maps, 11,978 recordings, and more than 3,000 periodical subscriptions. Faculty and staff of 57 [FTE] assisted by 25 students [FTE]. The Library has employed an Innovative Interfaces IOLS since 1989. For further information the Rod Library URL is: <http://www.uni.edu/library/>

Applications must be received by September 30, 1996 to be given full consideration. The Library encourages applications from minority persons, women, Vietnam Era Veterans and disabled persons. Send a letter of application, resume, and the names, addresses, and telephone numbers of three professional references to: Professor Stan Lyle, Chair, Documents & Maps Reference Librarian and Bibliographer Screening Committee, Rod Library, University of Northern Iowa, Cedar Falls, IA 50613.

The University of Northern Iowa is an inclusive academic community, hospitable to all. The University is an Equal Opportunity Employer with a comprehensive plan for affirmative action.

DOCUMENTS LIBRARIAN, Central Washington University, Ellensburg, WA

The Central Washington University Library seeks a librarian to help us provide high quality service in an academic environment increasingly reliant on electronic tools and networked information resources. There are opportunities to promote user education in a state-of-the art electronic classroom, provide full-text delivery to users in multiple service locations across the state, and develop methods to share resources with other institutions. We seek a librarian who is able to apply new technology, is sensitive to the needs of diverse users, and deeply

committed to service, teaching and scholarship

DOCUMENTS LIBRARIAN: Lecturer or Assistant Professor, 12 month position, faculty status. Report to the Head of Documents, Maps and Microforms Department. Assist in the management of a selective depository collection, a microform collection, and a map collection. Provide documents reference service and user instruction; engage in collection development; do original and copy cataloging of maps and Washington State documents using OCLC cataloging system; oversee use of Marcive services; assist library users with CD-ROM and Internet searching; supervise classified staff and student employees; participate as a faculty member in University and Library committees; work some evenings and weekends; may rotate to other departments, such as Reference, in order to expand expertise in these areas. The Documents, Maps, and Microforms Department includes two librarians and three library technicians.

QUALIFICATIONS: Minimum: Lecturer (non-tenure track): ALA accredited MLS or equivalent; strong public services orientation; demonstrated organizational, communication, supervisory and interpersonal skills; ability to work effectively in a team setting with students, staff and faculty colleagues.

Assistant Professor (tenure-track) additional requirements: five years professional university/college library experience or equivalent experience at other library; an additional advanced degree or systematic course work may substitute for up to three years experience.

Preference will be given to candidates with university/college library experience.

Desirable: Experience and/or education in: Documents, Maps, and Microforms Librarianship, OCLC online cataloging, CD-ROM database and Internet searching, Marcive or equivalent services, bibliographic instruction, participation in professional organizations.

Available: Immediately.

Appointment Information: Salary is competitive and negotiable. Rank and tenure track status are dependent on qualifications. Minimum salary: Lecturer (non-tenure track) $28,000, or Assistant Professor (tenure track) $33,973. Lecturers will be eligible to apply for tenure track status when faculty code requirements for Assistant Professor rank have been met. Comprehensive benefits package includes 22 days vacation and TIAA- CREF. Application review will begin October 15, 1996 and continue until the position is filled.

Send letter of application, resume, and the names, addresses and telephone numbers of three current professional references to:

Documents Librarian Search Committee, Daniel CannCasciato, Chair
c/o Dean of Library and Media Services
Central Washington University library
400 E. 8th Avenue
Ellensburg, WA 98926-7548

Central Washington University is an Affirmative Action, Equal Employment Opportunity, Title IX Insti-tution. It has a strong commitment to increasing the diversity of its faculty, staff, and student body. Central Washington University operates under an approved Affirmative Action Program and is especially interested in receiving applications from women, minorities, Vietnam-era veterans, disabled veterans, and persons of disability.

Central Washington University is a comprehensive state university which serves more than 8500 students, 1000 of which are enrolled in Centers in the Seattle/Tacoma area. Programs are offered through the College of Education and Professional Studies, College of Arts and Humanities, College of the Sciences, and the School of Business and Economics. The main campus is located in Ellensburg, a city of 13,000 at the intersection of Interstates 90 and 82. It is a two-hour drive from Seattle, the major cultural center of the Pacific Northwest. Ellensburg is situated east of the Cascade mountains in the Kittitas Valley, which is known as one of the finest living environments in the Pacific Northwest.

NEW MEMBERS

Michael Farmer
Alden Library
Ohio University
Athens, OH

Dillon Scott
Massachusetts Bays Program
Boston, MA

Kathleen Spencer
Geology Library
University of North Dakota
Grand Forks, ND

REVIEWS
by
Linda Musser

New articles

"World Wide Web Searching: Tricks of the Trade" (by Peggy Zorn, et al.; Online (May/June 1996):15-28) offers an excellent comparison and test of the searching features of four of the largest and most sophisticated Web browsers - Alta Vista, InfoSeek, Lycos, and Open Text.

"Getting the goods on the competition just got a whole lot easier" by Anne Stuart (Webmaster (July/August 1996): 38-43) discusses the advantages and caveats for using the Internet to gather corporate intelligence.

A brief note in this issue of Webmaster (p.12) discusses the usefulness of monitoring how people are getting to your web site. It describes some ways to obtain this information.

The first two issues of 1996 of the Journal of Geoscience Education (v. 44, nos. 1-2) feature the column "Exploring geology on the World Wide Web". The January column's focus is on invertebrate paleontology and evolution; the focus of the column in the March issue is on seismology and earthquakes. The January issue also includes the Geoflicks Reviewed column which reviewed films about the origin of the earth.

Library Journal's annual "Periodical Price Summary 1996" appears in the April 15, 1996 issue (v.121, no.7, p. 45-51).

"Who owns digital works?" by Ann Okerson (Scientific American (July 1996): 80-84) gives a nice summary of the copyright issues of electronic resources. [Thanks to Nan Butkovich for pointing this out.]

"Women in technical/scientific professions: results of two national surveys" by Carolyn Boiarsky, et al. (IEEE Transactions on Professional Communication, v.38, no. 2 (June 1995):68-76) concludes that the workplace is changing, becoming more family oriented although glass ceilings still exist.

"News resources on the World Wide Web" by Greg R. Notess (Database (Feb./March 1996):13-20) describes many of the freely available news resources on the Web, provided by companies such as CNN and Reuters.

Two recent issues of Online & CDROM Review (v. 19, no.4 and v.20, no.1) feature the sixth and seventh articles on new database products in science, technology and medicine. The data, primarily tabular, are compiled from new listings in the Gale Directory of Databases.

"Choosing our futures" by Carla J. Stoffle, et al. (College and Research Libraries, v.57, no.3 (May 1996): 213-225) discusses how academic libraries must change to meet future challenges. It is followed by several commentaries providing differing points of view (p. 226-233).

DENIS LEVASSEUR and Gilbert Prichonnet have published "La dispersion clastique des debris rocheux dans les eskers et le till adjacent de la region de Chapais - Chibougamau (Quebec) au Wisconsinien superieur" (Canadian Journal of Earth Sciences, v.32, no.5 (May 1995): 590-602).

Recent reference book reviews:

Handbook of mineralogy, v. 1 & 2. Choice, v. 33, no. 9 (May 1996), p. 1506.

New professional books:

Information technology outsourcing transactions. Wiley, 1996.

The evolving virtual library: visions and case studies. Information Today, 1996.

Directory of library automation software, systems and services. Information Today, 1996.

Entrepreneurial librarianship: the key to effective information services management. Bowker, 1996.

ANNOUNCEMENTS and PUBLICATIONS

Ever felt like you existed in a vacuum when you needed climatological data? Sure that somewhere out there, someone had /gathered just the data you needed? Well, a new group is being formed to help facilitate communication in the atmospheric sciences!

On June 10 at the SLA Annual Conference in Boston, a group of about 15 atmospheric sciences librarians met to discuss the formation of a new group "Atmospheric Science Librarians International" or "ASLI". The purpose of ASLI is to address issues and exchange information on atmospheric science topics. To this end, a listserv for ASLI has been established, a homepage is under development, and future meetings and projects are being planned.

The librarians in attendance covered a wide spectrum of institutions, including the National Oceanic and Atmospheric Administration Central Library, Environment Canada Quebec Regional Library, NASA Goddard Space Flight Center Library, Air Weather Services Library, Oak Ridge National Laboratory Library, Global Change Research Information Office, Desert Research Institute, MIT Haystack Observatory, and the Geophysical Institute at the University of Alaska. Other libraries not present at the meeting have also subscribed to the ASLI listserv, including libraries of the UK Meteorological Office and the European Center for Medium-Range Weather Forecasting.

Through this new group, the librarians hope to gain a better sense of what resources, historical and current, national and international, are available. The group hopes to form a directory of involved institutions, with a brief description of their holdings and expertise. To become a member, of the ASLI listserv, send an email message to: asli-request@www.lib.noaa.gov

Be sure to include text with your name, FULL email address, title and organization. Adding your mailing address, phone and fax will help begin the directory. Comments, advisories, and requests may be made to the same email address. The listserv is not juried, and because the mailing list is handled by a person not a computer, there may be some delay in processing your request. If you do not have access to email, or would like more information, send inquiries to:

Betty Petersen
Reference/ASLI
NOAA Central Library
SSMC3, 2nd Floor
1315 East-West Highway
Silver Spring, MD 20910
FAX: 301-713-4598
Phone: 301-713-2600 x 115

You can also visit the ASLI webpage at: http://www.lib.noaa.gov/asli/asli.html Membership is free - so sign-up today!

DENA HANSON recommends the article in Geoscience Canada, v. 21, no. 4, 1994, p. 176-178, "Pyroclasts: Surfing the Swamp," by Andrew Miall. She says it has great stuff about the relative usefulness of the internet and the value of good old fashioned (and endangered) librarians, their skills and resources.

WANTED: GIS NEWSLETTER EDITOR

The Geoscience Information Society is seeking a new editor for the Newsletter.

Requirements: Must be a GIS member. E-mail, phone, and fax access needed; facility with ftp, word processing and desktop publishing a plus.

Salary: The fun of getting all the news first, getting to know the GIS members, and, 1 weekend every 2 months, having a great excuse for not mowing the lawn. And, you'll learn the identity of the High Plains Drifter, the Glacial Drifter, and any other drifters who drift by.

Position available November, 1996.

Connie J. Manson
2525 Sleater Kinney Road N.E.
Olympia, WA 98506

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