



Contents

President's Column.....	1	Committee Annual Reports	6
Vice President's Column.....	1	2008 Auditor's Report.....	10
Conference Updates.....	3	GSA/GSIS Technical Session Abstracts	11
Call for CVs.....	5	Literature Reviews.....	18
Ansari Best Reference Work Award	5	Publications Available.....	26

PRESIDENT'S COLUMN

By Jan Heagy

We are gearing up for the GSIS annual conference later this month. Janet Dombrowski and Kay Johnson have wonderful programs in store. I would like to ensure that our annual Business Meeting meets your needs. To that end, what items would you like included on the agenda?

Here are a few topics that have been suggested:

- ◆ Enhancing GSIS member participation opportunities
- ◆ Future directions for GSIS
- ◆ Marketing GSIS

As you can see, I have already received some great input; however, I welcome your additional ideas. What would **you** like GSIS to address in 2011? Please e-mail your suggestions to me:
jan.heagy@exxonmobil.com.

See you in Denver!

VICE PRESIDENT'S COLUMN

By Kay G. Johnson

We are getting down to the wire for the GSIS Annual Meeting. Everything is going smoothly for room scheduling. The caterer and AV support have been in touch with me. I am working out details for a tour, but we are definitely going to the Denver Museum of Nature and Science for our field trip on Wednesday. I am excited and optimistic that a tour will work out, and will let you know as soon as I have final details. I am also thrilled that the Geological Society will be sponsoring our Round Table session and providing a brief presentation about recent updates to the Lyell Collection before our discussion sessions.

It continues to be terrific working with Jan and Janet on conference preparations. Both are good about pointing out the forest when I'm stuck on the trees. There must be a related geology metaphor – Can't see the rock for the minerals?

I look forward to meeting you in Denver!

GEOSCIENCE INFORMATION SOCIETY 2010 OFFICERS

President

Jan Heagy
ExxonMobil Upstream Research Information Ctr.
P.O. Box 2189
Houston, TX 77252-2189
phone: 713-431-4466
fax: 713-431-4157
e-mail: jan.b.heagy@exxonmobil.com

Vice-President (President Elect)

Kay Johnson
Radford University McConnell Library
801 E. Main Street
P.O. Box 6881
Radford, VA 24142
phone: 540-831-5703
fax: 540-831-6214
e-mail: kjohnson497@radford.edu

Immediate Past President

Rusty Kimball
Texas A&M University
5000 TAMU
College Station, TX 77843-5000
phone: 979-862-1909
fax: 979-450-4123
e-mail: rkimball@lib-gw.tamu.edu

Secretary

Elaine B. Adams
UCLA Science & Engineering Library
8251 Boelter Hall
P.O. Box 951598
Los Angeles, CA 90095-1598
phone: 310-825-2649
e-mail: ebadams@library.ucla.edu

Treasurer

Angelique Jenks-Brown
Binghamton University Science Library
P.O. Box 6012
Vestal Parkway East
Binghamton, NY 13902
phone: 607-777-4596
fax: 607-777-2274
e-mail: ajbrown@binghamton.edu

Website: <http://www.geoinfo.org/>

Webmaster: Janet Dombrowski
Brinkerhoff Geology Library
University of Wyoming
Laramie, WY 82073
phone: 307-766-6538
e-mail: jdombrow@uwyo.edu

Listserv:

<https://lists.purdue.edu/mailman/listinfo/geonet>
Moderator: Carolyn J. Laffoon
Purdue University Libraries, EAS
504 West State Street
West Lafayette, IN 47907-2058
phone: 765-494-0201
fax: 765-496-1210
e-mail: carolyn@purdue.edu

Newsletter Editor

Janet Dombrowski
Brinkerhoff Geology Library
University of Wyoming
Laramie, WY 82073
phone: 307-766-6538
e-mail: jdombrow@uwyo.edu

Publications Manager

Ellie Clement
Cabot Science Library/Harvard University
One Oxford Street
Cambridge, MA 02138
phone: 617-495-5353
fax: 617-495-5324
e-mail: clement@fas.harvard.edu

Publicity Officer

vacant

The digital GSIS Newsletter is published bi-monthly in February, April, June, October, October, and December by the Geoscience Information Society. Subscription is free to GSIS members. The annual non-member subscription rate is \$40. Please contact the GSIS Publications Manager for paper copy subscription prices. All correspondence regarding dues, membership status, and address changes should be directed to the GSIS Secretary. GSIS members are encouraged to contribute content for publication. Material for the December 2010 issue should be received no later than December 8, 2010. Please send submissions by e-mail to jdombrow@uwyo.edu.

CONFERENCE UPDATES

◆ FINAL SCHEDULE

Saturday, Oct. 30

9:15 am. - 3:45 pm.

Auraria Library

Geosciences Librarianship 101

6:00 p.m. – 9:00 p.m.

HyattCCC, Capitol Ballroom 1

GSIS Executive Board Meeting

Sunday, Oct. 31

9:30 a.m. - 12:30 p.m.

HyattCCC, Capitol Ballroom 1

GSIS Business Meeting

Monday, Nov. 1

12:30 – 2:00 p.m.

HyattCCC, Capitol Ballroom 3

GSIS Luncheon (*ticketed event #306*)

2:00 p.m. – 5:00 p.m.

HyattCCC, Centennial Ballroom A

GSIS Professional Issues Round Table

Session sponsored by



The
Geological
Society

-serving science & profession

Tuesday, Nov. 2

8:00 am. – 12:00 noon

Colorado Convention Center Room 708

T79. Geoscience Information Services:

"Peak" Performances (*abstracts on pg. 11*)

6:00 p.m. – 9:00 p.m.

HyattCCC, Mineral Hall A

GSIS Reception, Awards, and Silent Auction

Wednesday, Nov. 3

Morning

GSIS Field Trip to Denver Museum of Nature & Science (*details to come*)

◆ ADDITIONAL EVENTS OF INTEREST

Sunday, Oct. 31, 1:30 pm.-5:30 pm.

Colorado Convention Center: Room 703

T91. Successes and Societal Benefits of Data Preservation

GSA Geoinformatics Division; U.S.

Geological Survey; Association of American

State Geologists; GSA Geophysics Division;

GSA Geology and Society Division

Preservation of geological, biological, and cultural data is important to the Nation's well-being. This session will provide examples of data preservation and the societal benefits of preservation and access to these data. View schedule of speakers and abstracts online at http://gsa.confex.com/gsa/2010AM/finalprogram/session_26143.htm

GeoScienceWorld's 4th Annual Users' Group Meeting

For Researchers, Students, Librarians, and Publishers

Tuesday, Nov. 2, 12 noon – 1:30 pm

Mineral Hall A, Hyatt Regency Denver Hotel

All GSW users are invited to attend the fourth GSW Users' Group meeting during the GSA annual meeting in Denver, Colorado. A complimentary lunch will be served, but seating is limited. If you'd like to join us, please reserve your seat by sending an email to gswinfo@geoscienceworld.org with the subject "GSW 4th Users' Group Meeting." We'll let you know if you've made the list by return e-mail. Those with confirmed reservations will need to visit the GSW booth (number 928) in the Exhibition Hall to pick up a ticket for this event.

**2ND CALL: TECHNICAL SESSION
CONVENER FOR GSA/GSIS 2011**

Are you coming to Denver? And likely to attend next years' GSA/GSIS Annual Meeting in Minneapolis, Oct. 9-12, 2011? Ideally, the 2011 convener will attend this years' meeting and work with convener to better understand the process.

The GSIS technical session convener is responsible for proposing a theme, identifying co-sponsors, securing

commitments from two or three invited speakers, and encouraging participation by GSIS members. Planning is done in consultation with the GSIS President and Vice-president. During the session the convener introduces speakers, facilitates Q & A, and keeps the session on track.

Please contact Janet Dombrowski before this years' conference if you are interested in serving in this capacity.

[e-mail: jdombrow@uwyo.edu;
phone: 307-760-5452]

A Big Thank You to:



**The
Geological
Society**

serving science & profession

Sponsor of the GSIS Professional Issues Round Table

CALL FOR CV'S

Several years ago an appeal was made to past GSIS officers to send their CV's to the Society Archivist both for historical purposes and to aid committee work such as that done by the Distinguished Service Award Committee. As chair of the committee I am renewing the call, starting with the presidents.

If you have served GSIS as president since 1989 would you kindly send your CV, in digital form, to me. I will keep a copy for the committee and send another to the archives.

E-mail me at pyocum@umich.edu. Many thanks.

Patricia Yocum

ANSARI BEST REFERENCE WORK AWARD

The GSIS Mary B. Ansari Best Reference Work Award Committee reviewed ten nominations for the 2010 award:

- ◆ *Encyclopedia of Earthquakes and Volcanoes*
- ◆ *Evolution of Matter*
- ◆ *Handbook of Gold Exploration and Evaluation*
- ◆ *Manual of Mineral Science, 23rd Edition*
- ◆ *Metamorphic Rocks*
- ◆ *Michigan Geography and Geology*
- ◆ *Ocean: An Illustrated Atlas*
- ◆ *Petroleum Engineering Handbook*
- ◆ *Planetary Crusts*
- ◆ *Treatise on Geophysics*

The Committee members based their selection on average scores of a ten-point, ten-criteria scale. The winner for the 2010

award is "Planetary Crusts: Their Composition, Origin and Evolution" by S. Ross Taylor and Scott McLennan, Cambridge University Press. This work received high scores for its uniqueness in subject coverage, the quality of the work, and the authoritative-ness of the authors. Plans are being made to present the award at the 2010 Annual GSIS conference in Denver, CO.

Committee members include: Edward Lener (Virginia Tech), Dennis Trombatore (University of Texas at Austin), and Angelique Jenks-Brown, Chair (Binghamton University, NY).

Respectfully Submitted,
Angelique Jenks-Brown

COMMITTEE ANNUAL REPORTS

Annual Report: Geonet Listserv

Geonet Listserv has 376 subscribers as of 9/23/10, up from 355 in 2009. The different categories are as follows:

- .edu** = 185, 48%, up from 163 last year;
- .com** and **.net** = 77, 20%, down from 71 last year;
- foreign** = 77, 20%, down from 88 last year;
- .gov** = 32, 8%, up from 23 last year;
- .org** = 18, 4%, down from 12 in 2010.

Some subscribers are listed in two categories, i.e. foreign and .edu, making the totals more than 376.

Contact me with any questions at:
Carolyn@purdue.edu

Respectfully submitted,
Carolyn J Laffoon
Geonet Listserv Moderator

Archives Committee Annual Report 2010

There have no new activities since the mid-year report. The GSIS archives holdings can be viewed at <http://www.library.uiuc.edu/archives/> (search on "geoscience"). As a reminder, members are invited to submit library histories, biographies, vitae, photographs from GSIS meetings and field trips, or other manuscripts that document the history of GSIS or its members.

Please mail items for inclusion to
Anne Huber, Illinois State Geological
Survey
615 E. Peabody Dr.
469 Natural Resources Building
Champaign, IL 61820

You may also contact Anne by email at huber@isgs.illinois.edu.

Respectively submitted,
Anne Huber

Guidebooks Committee – Annual Report, September 2010

Guidebook Standards: Louise Zipp and Thelma Thompson are working at disseminating guidebook guidelines to organizations. Louise disseminates Guidebook Guidelines in the United States, from Ohio to Nebraska and north to the border, and also in Canada, from Manitoba to Alberta, and Nunavut. Since the mid-year report, she sent out an additional 28 emails and there was one personal contact (thanks to Mary Scott) to encourage authors of 2010 guidebooks to use the GSIS Guidebook Guidelines. There were a total of 45 contacts this year so far for her region in the US and Canada. Despite the value of the Internet, Louise found that some regional organizations have no Internet presence or

have allowed their websites to go without updates for two or three years. Other organizations communicate their activities and opportunities only to members by way of their newsletters, some of which are not uploaded to their websites. This means that time-dated information is being poorly disseminated, and that those newsletters are an even more important aspect of the grey literature now. Louise continues to encourage others to work on the Committee to disseminate the Guidelines. Even a few volunteers with just a little time would help the effort.

Thelma is working on the Northeastern Region of the U.S. There are about 40 organizations on the Northeastern Region list nearly all of which were compiled by Louise. Thelma has added a few newly discovered or newly formed organizations. There are just a few national organizations whose meetings were also held in the northeast this year. Many organizations have online calendars which as late as August had no postings for 2010. Thelma sent information to about 15 organizations. Several sent back “thank you’s” and other acknowledgements.

Best Guidebook Award: The Best Guidebook Award for 2010 goes to Scott Southworth, D. K. Brezinski, R.C. Orndorff, J.E. Repetski., and D.M. Denenny for *Geology of the Chesapeake and Ohio Canal National Historical Park and Potomac River corridor, District of Columbia, Maryland, West Virginia, and Virginia*: U.S. Geological Survey Professional Paper 1691, 2008, 144 p., 1 pl. (Also available online at <http://pubs.usgs.gov/pp/1691/>.) The Award will be presented at the GSIS/GSA Conference in Denver in November. Members of this year’s Best Guidebook Award Subcommittee are Erin Palmer, Chair; Jody Foote; and Linda Musser.

Gaps Project: Lura has maintained the Guidebook Waiting List for AGI GeoRef. Very few people have reported new guidebook titles being added to their collections. Please remember to report the new titles to Lura Joseph <luraj@illinois.edu>. Work on the spreadsheets has stalled due to demands of closing the UIUC Geology Library. Hopefully work can be resumed in Spring semester.

Respectfully submitted,

Lura Joseph
Chair, GSIS Guidebooks Committee

Annual Report: Website Committee
2010 Best Website Award

On behalf of the GSIS Best Website Committee, I am honored to announce the 2010 winner: THE ECHINOID DIRECTORY, by Dr. Andrew Smith, Natural History Museum of London
<http://www.nhm.ac.uk/research-curation/research/projects/echinoid-directory/>

John Kawula and Robert Tolliver served on the Best Website Committee this year. Their assistance has been invaluable. Below are comments from the committee members:

This is an excellent web site for anyone interested in echinoids. The site has a clear layout and is well organized and has a great deal of information on echinoids including sections on morphology, keys to identification, classification, 3D models, an index to taxa, and a glossary. Index of taxa is very extensive and informative with images, in some cases of the type specimen. (Robert Tolliver)

This site, an open community project

maintained by Dr. Andrew Smith of the Natural History Museum in London, provides a non-technical overview as well as a detailed taxonomic resource for Echinoids, a major group of marine invertebrates with an extensive and well documented fossil record. Most of the site is highly technical with a large glossary, illustrated keys for identification, hierarchical classification, and searchable index. Without a doubt, one of the most striking and noteworthy features of the site are the exquisite, sharply focused high resolution images and interactive 3-D models. (John Kawula)

The imagery is spectacular, the information is accurate, and the educational value is huge. It excels in so many ways, every year it gets a little bit better until now it is the most authoritative work on echinoids for the on-line world. It is a truly remarkable production by Andrew Smith at the Natural History Museum in London. It is a must for paleontologists both academic and amateur... and just anyone who want to be paleontologists both academic and amateur... educated...painlessly! This site is an open community project which currently provides access to images of the type species of almost all described genera of echinoid, both Recent and fossil. Some additional non-type species are also illustrated. (Ann M. Molineux-nominator)

Dr. Andrew Smith, creator of this website, plans to come from England to personally accept this award at the GSIS Reception! We are very honored and are so looking forward to meeting him!

Respectfully Submitted,
Carolyn Laffoon
Chair, GSIS Best Website Committee

Annual Report of the GSIS Best Paper Award Committee

The Geoscience Information Society Best Paper Award Committee selected Linda R. Musser's article titled "Progress in the Citation of Geoscience Data" for its 2009 Best Paper Award. The paper was published in volume 39 of Proceedings of the Geoscience Information Society and was based on a paper given at the 2008 meeting of the Society.

Carol J. La Russa (Chair)
Nancy Sprague
Cynthia L. Prosser

Nominating Committee Report by Rusty Kimball, Chair

As announced recently on Geonet-L, the results of the GSIS elections for 2010 determined that Lisa Johnston will be the new Vice President/President Elect and that Cynthia Prosser will be the new GSIS Secretary. Applause!! It seemed fitting to include their biographies now, before our Annual Meeting in Denver, so here goes.

Lisa Johnston has served as the Geology, Physics and Astronomy Librarian at the University of Minnesota-Twin Cities Campus since September 2007. Her areas of focus have included digital libraries, scientific data curation, information-seeking behavior, and web development of user-centered tools to access information. She has worked closely with researchers and library colleagues to develop new tools and services such as a Google Map interface called MapHappy, a geo-display for the newly cataloged geology map collection for better discovery and access, and digitizing and hosting all Minnesota Geology Survey maps and publications in the university's institutional

repository. She has also conducted research that explores the information-seeking behavior of geoscientists through citation analysis. Lisa received her Master of Library Science from Indiana University in 2007, holds a BS in Astrophysics -also from IU, and has a background in scientific journalism as a former editor of *Sky & Telescope Magazine*. Since joining GSIS in 2007, she has served as the Technical Session Convener of the 2008 GSA meeting in Houston, TX, and the proceedings editor of the conference papers, "Libraries in Transformation," published by GSIS in 2009.

Cynthia Prosser has served as the Physical Sciences Bibliographer at the University of Georgia Science Library since 2007 and holds Master's degrees in both Geology and Library Science. She has worked at the University of Georgia Libraries since 1997 and is the library's liaison to the Franklin College departments of Chemistry, Computer Science, Geography, Geology, Mathematics, Physics and Astronomy, and Statistics. Cynthia has been a member of GSIS since 2004 and served on the Collection Development Committee in 2007-2008, as the first chair of the newly formed Information Resources Committee (previously the Collection Development and Electronic Resources Committees) in 2009, and on the Best Paper Committee in 2010.

Annual Report: GL101 Workshop Team

The sixth Geoscience Librarianship 101 Workshop is planned for October 30, 2010, and will be held at Auraria Library in Denver.

The initial response to registration indicates a high turnout. Presenters this year are: Linda Zeller (Western Illinois University); Lisa Dunn (Colorado School of Mines);

Adonna Fleming (University of Nebraska); and Lura Joseph (University of Illinois, Champaign-Urbana).

We are extremely grateful to all members of the workshop team, which also includes Andrea Twiss- Brooks (University of Chicago) and Shaun Hardy (Carnegie Institution of Washington), who continues to do an outstanding job with publicity and registration.

This report will be updated at the business meeting.

Respectfully submitted,
Clara P. McLeod, Workshop Coordinator
Geoscience Librarianship Workshop Team

CUAC Representatives Annual Report 2010

The Cartographic Users Advisory Council (CUAC) Annual Meeting was held June 24-25, 2010, at the George Mason University-Arlington Campus Library in Arlington, VA. Our host was Council Member, Joy Suh, GODORT (ALA Government Documents Roundtable). Reports were given by the following: Rob Dollison, U.S. Geological Survey; Jerry Johnston, Environment Protection Agency; John Hebert, Library of Congress; Lee Hadden, U.S. Army Corps of Engineers; Richard Huffine, U.S. Geological Survey; Alexander Murphy, National Academy of Sciences; Ken Shaffer, Federal Geographic Data Committee; Patrick Mahoney, Bureau of Land Management; Jeff Bailey, U. S. Department of Agriculture; Dan Good, National Resource Conservation Service; Constance Beard, U.S. Census Department; Skip Theberge, National Oceanic and Atmospheric Administration; Betsy Kanalley, USDA Forest Service; and Joe McClane, Government Printing Office.

Before the meeting GISIS members were invited to send ideas/issues/concerns to their CUAC representatives for discussion with federal agency representatives with an interest in cartographic materials. CUAC continues to focus on matters concerning maps (printed and digital), and geo-spatial data: organization, archiving, and preservation. Speakers were asked to address the following questions during or after their presentations: How are you working with the GPO on the LOCKSS project? How are you archiving digital data? Are you delivering data through downloads or a web map service? Do you have a plan to create metadata? There is a lot of data on the web without metadata—have you tested the print on demand maps? (USGS) and Do you have a pricing scale based on who is buying (discount for Universities & Libraries)? (USGS).

CUAC has been invited by Joe McClane to plan a session on mapping/geo-spatial data for government document librarians at the annual Federal Depository Library Conference to be held in Alexandria, VA, October 18-20, 2010. The session will highlight the current status of data.gov, geodata.gov, and the USGS digital topographic map movement.

The conference agenda and presentation minutes will be posted on the CUAC website (<http://cuac.wustl.edu/>) after receiving approval from the presenters.

Respectfully submitted,
Clara P. McLeod
Linda Zellmer
GISIS Representatives to CUAC

DATE: September 25, 2010

TO: Jan B. Heagy, President,
Geoscience Information Society
ExxonMobil Upstream Research Center
P.O. Box 2189
Houston, TX 77252
jan.b.heagy@exxonmobil.com

(Electronic copies furnished to GSIS Executive Board)

FROM: Margy Walsh, Auditor
Geoscience Information Society

SUBJECT: 2008 Auditor's Report

I have reviewed the 2008 financial records of the Geoscience Information Society, as provided by previous Treasurer Renee Davis. I found the records to be an accurate and well-organized representation of GSIS finances.

Respectfully submitted,

Margy Walsh
Chevron Corp.
1500 Louisiana, 01125A
Houston, TX 77002
mwalsh@chevron.com

cc by e-mail:

Newsletter Editor: Janet Dombrowski, jdombrow@uwyo.edu
Renee Davis, rdavis2@umw.edu
GSIS Executive Board:
Vice President Kay Johnson, kjohnson497@radford.edu
Secretary Elaine B. Adams, ebadams@library.ucla.edu
Treasurer Angelique Jenks-Brown, ajbrown@binghamton.edu
Immediate Past Pres: Rusty Kimball, rkimball@lib-gw.tamu.edu



THE GEOLOGICAL SOCIETY
OF AMERICA®

2011 Annual Meeting

Archean to Anthropocene – the past is the key to the future

9-12 October 2011 • Minneapolis, Minnesota

Minneapolis Convention Center

<http://www.geosociety.org/meetings/2011/>

GSA/GSIS TECHNICAL SESSION ABSTRACTS

(reprinted with permission)

Session No. 162

Tuesday, 2 November 2010

8:00 AM-12:00 PM, Colorado Convention Center: Room 708

T79. Geoscience Information Services: "Peak" Performances

(Geoscience Information Society; GSA Geoinformatics Division; National Association of Geoscience Teachers)

8:00 AM-8:20 AM

STATE GEOLOGICAL SURVEY DEPLOYMENT OF THE NATIONAL GEOTHERMAL DATA SYSTEM

ALLISON, M. Lee and RICHARD, Stephen M., Arizona Geological Survey, 416 W. Congress, #100, Tucson, AZ 85701-1381, lee.allison@azgs.az.gov

Addressing scientific solutions to the challenges of energy supply as well as landslides and earthquakes, minerals and mining, water supply and flooding, pollution and erosion, and not least, climate change, is dependent on geological data. Rich environmental data are extensive, but when they are available, they are often exceptionally difficult to discover, exist in different formats and via different services, with different access conditions.

A coalition of State Geological Surveys (via Association of American State Geologists - AASG) is expanding and enhancing the National Geothermal Data System (NGDS) by creating a national, sustainable, distributed, interoperable network of data providers representing all 50 states that will develop, collect, serve, and maintain geothermal-relevant data that operates as an integral compliant component of NGDS. The data exchange mechanism is built on the Geoscience Information Network (GIN) protocols and standards.

Data are exposed from the State Geological Surveys through the NGDS, by digitizing at-risk legacy, geothermal-relevant data (paper records, samples, etc), publishing existing digital data using standard web and data services, and through limited collection of new data in areas lacking critical information.

Goals are to enhance states' abilities to preserve and disseminate geothermal data; facilitate geothermal resource characterization and development efforts; expand the scope of data available to the geothermal community; foster new services and applications built by third-parties to take advantage of the system's capabilities and content; contribute materially to creation of a national geoinformatics system through implementation and deployment of NGDS; and increase operational support for geoinformatics infrastructure through broader user base.

This material is based upon work supported by the U.S. Dept. of Energy, Geothermal Technologies Program under award DE-EE0002850, and the National Science Foundation under Grant No. 0753154.

8:20 AM-8:40 AM

MAPS, MAPS AND MORE MAPS: THREE APPROACHES TO REACH THE MASSES

BALLAGH, Lisa M., National Snow and Ice Data Center, Cooperative Institute for Research in Environmental Sciences, Univ. of Colorado at Boulder, 1540 30th St, Boulder, CO 80309, vtlisa@nsidc.org, CARTWRIGHT, John C., National Oceanic and Atmospheric Administration, National Geophysical Data Center, Boulder, CO 80305-3328, and WALLACE, Allaina M., National Snow and Ice Data Center, Boulder, CO 80309

Online mapping applications and services have made promoting data collections easier than ever, affording opportunities to visualize and disperse map content to the masses. While paper libraries still exist, librarians and archivists are adopting measures to preserve content and make their collections widely accessible. Web mapping can enhance a collection by depicting: 1) news on maps, 2) visualizations on maps, and 3) interoperability via maps. The interoperability aspect is crucial as it allows the map services to be used in ways and with clients that the original authors may not have foreseen. Examples of these approaches include the use of a GeorSS feed, Google Earth and a Web Map Service.

8:40 AM-9:00 AM

DATA PRESERVATION AND MAINTENANCE OF THE OREGON GEOLOGIC DATA COMPILATION

MA, Lina and LYLES, Rachel, Oregon Department of Geology and Mineral Industries, 800 NE Oregon St. #28, Suite 965, Portland, OR 97232, lina.ma@dogami.state.or.us

As the use of Geographic Information Systems (GIS) became more widespread in the geologic community, the Oregon Department of Geology and Mineral Industries (DOGAMI) recognized the need to provide users with digital geologic information. DOGAMI embarked on a multi-year effort to capture and classify the “best available” geologic mapping of the state. GIS and a relational database were employed, and provided the infrastructure for storage, processing, and portrayal of this information collected from 345 published and unpublished maps, theses, and dissertations. The Oregon Geologic Data Compilation (OGDC) was the culmination of this effort. OGDC was also built in conjunction with the Oregon Geospatial Enterprise Office as part of the Geoscience Framework Theme for statewide spatial data as part of the National Spatial Data Infrastructure initiative. It has since been implemented as the state’s geologic data standard.

DOGAMI is currently developing a methodology to update OGDC by adding more recent publications to maintain it as the “best available” source of geologic data for the state. New geologic mapping is continually being created, has been available since completion of the project, and needs to be incorporated into the data set to keep it current. Recent work includes a conversion of the spatial files and the tabular database into a file geodatabase, a standard file platform of ESRI software. Future iterations of OGDC will be developed and published in the geodatabase format, rather than the two separate components of previous releases. This new methodology will help streamline updates in the future while preserving the existing legacy data in a more robust geodatabase technology.

9:00 AM-9:15 AM

GEOSCIENCE DATABASES: A COMPARATIVE ANALYSIS

ZELLMER, Linda R., University Libraries, Western Illinois University, One University Circle, Macomb, IL 61455-1390, LR-Zellmer@wiu.edu

Many bibliographic indexes are available for research in the geosciences, including general indexes such as Academic Search and InfoTrac; science databases, such as Web of Science; and subject specific geosciences databases, such as GeoBase, GeoRef, Meteorological & Geostrophysical Abstracts, Oceanic Abstracts, and Water Resources Abstracts. As library budgets are reduced by inflation and other cuts, libraries are increasingly looking at all possible savings, including reducing database subscriptions.

A comparison of six major geoscience and science databases, including GeoBase, GeoRef, Meteorological & Geostrophysical Abstracts, Oceanic Abstracts, Water Resources Abstracts and Web of Science, reveals that each index contains unique content and search capabilities. Examining the coverage of these databases to identify the number and nature of unique and duplicate titles and assessing the needs of the local user population enables librarians and their users to make an informed decision regarding possible database cancellations. Based on the results of these comparisons, librarians will be able to hold informed discussions with their users regarding potential database cancellations.

9:15 AM-9:30 AM

EXPANDING ACCESS TO THE GEOSCIENCE LITERATURE: NEW DEVELOPMENTS WITH THE USGS PUBLICATIONS WAREHOUSE

HUFFINE, Richard, U.S. Geological Library, 12201 Sunrise Valley Drive, MS 159, Reston, VA 20192, rhuffine@usgs.gov

The United States Geological Survey has recently released an updated and enhanced version of their on-line publications system, the Publications Warehouse. In addition to numerous enhancements to the interface, the USGS is now including citations for literature authored by USGS staff in addition to publications published by the Survey. This new development will support future identification of relevant geoscience literature that may be in the public domain due to federal law regarding public access to federally funded research. These enhancements will impact future generations of researchers and will potentially increase the availability and use of federal research within the geoscience literature.

The presentation will focus on the recent enhancements as well as planned future developments to improve the durability of digital information and the long-term preservation of the geoscience literature using this and other tools within the United States Geological Survey.

9:30 AM-9:45 AM

OPEN ACCESS GEOLOGY: USING THE INSTITUTIONAL REPOSITORY TO HOST STATE GEOLOGICAL SURVEY PUBLICATIONS

JOHNSTON, Lisa, Science and Engineering Library, University of Minnesota, 108 Walter Library, 117 Pleasant St. SE, Minneapolis, MN 55455, ljohnsto@umn.edu and

THORLEIFSON, Harvey, Minnesota Geological Survey, University of Minnesota, 2642 University Ave. W, St. Paul, MN 55114

The Minnesota Geological Survey (MGS) hosts information systems containing data sets that are valuable historic and scientific resources for the state. Several options are being pursued to curate, preserve, describe, and disseminate these data to broader audiences, including web services, national data archives, and institutional repositories. One of the challenges has been to find a means to make available scanned versions of geological survey publications. Geoscience research literature is increasingly published electronically and made digitally available for immediate online access. For state geological survey publications, a library-run institutional repository (IR) can be an excellent solution to host digitized and born-digital content. In the past few years, MGS has scanned all of its publications published since 1872 through a number of library and state preservation grants. The comprehensive project included over 40,000 pages of reports, guidebooks, and bulletins, and over 600 maps, along with GIS data files from recent decades. This talk will describe how the MGS content was archived in the university's institutional repository and the issues and challenges we faced such as format decisions, workflow issues, and modes of user access.

9:45 AM-10:00 AM

SUPPLEMENTARY MATERIALS IN GEOSCIENCE JOURNALS

SPRAGUE, Nancy and KENYON, Jeremy, University of Idaho Library, PO Box 442350, Moscow, ID 83844-2350, nsprague@uidaho.edu

The growing trend to include online supplementary materials in journals has provided opportunities for authors to add enhancements, such as data sets, color photos, or multimedia objects to their articles, which could not be included in printed journal pages. The addition of these supplementary materials has created new challenges for librarians, publishers, reviewers, and researchers in terms of access, peer review, citation, and data preservation.

To better understand the current status of supplementary materials in geoscience journals, this study focused on a small sample of high impact, peer-reviewed journals representing a range of geoscience publishers. We examined author guidelines and publisher policies for each journal to find information on size limits, format restrictions, peer review, citation, and archival practices. Also, we documented the publication frequency and different types of supplementary materials included in these geoscience journals. Finally, we investigated the ease of access, navigation, and linking options that publishers have provided for these materials. This talk will present our findings and recommendations for making supplementary materials easier for users to locate and access.

10:00 AM Break

10:15 AM-10:30 AM

**AN ASSESSMENT OF IMAGE QUALITY IN GEOLOGY WORKS FROM THE
HathiTrust DIGITAL LIBRARY**

MCEATHRON, Scott R., University Libraries, University of Kansas, 1301 Hoch Auditoria Dr, Lawrence, KS 66049, macmap68@ku.edu

This study assesses the quality of both images and text in a sample from the 2,180 works on geology from the HathiTrust Digital Library (multi-institutional digital repository)--an outgrowth of the Michigan Digitization Project and partnership with Google, Inc. A random sample of 180 (consisting of 47,287 pages) was made and reveals many patterns and characteristics of the digital manifestations of these works. The good news is that of the total 47,287 pages that were reviewed, only 2.5% had errors. The bad news, of the 180 works, 114 or 63% had at least one scanning error. It is important for librarians and readers to know the strengths and shortcomings of this repository in considering future decisions on both de-accessioning and remote storage of works from libraries.

10:30 AM-10:45 AM

GEOSPATIAL DATA PORTALS: LIBRARIANS ADD EXPERTISE IN THE DEVELOPMENT OF GIS METADATA CATALOGS

FLEMING, Adonna C., Geology Library, University of Nebraska - Lincoln, 10 Bessey Hall, 0344, Lincoln, NE 68588, dfleming2@unl.edu

Searching a geospatial data catalog can be frustrating for many GIS data users. Geospatial data catalogs are built on records created to a specific metadata standard, such as ISO 19115. The search query is often limited to searching a few tags within the record, such as title, publisher, spatial extent, content theme, and content type. GIS personnel tend to create metadata records with little thought into how it will be discovered by others. On the other hand, library catalogs are developed for a broad spectrum of users with varying knowledge of the subject. Librarians can bring this expertise in creating user-friendly catalogs to the GIS profession.

In the development of NebraskaMAP, a statewide geospatial data sharing portal and web services network, the GIS Librarian from the University of Nebraska-Lincoln used knowledge of Boolean operators, Lucerne query syntax, and the understanding of geospatial metadata standards to improve the searching, retrieval, and display capabilities of this geospatial data portal's metadata catalog.

This paper describes the process of building a statewide geospatial data portal in Nebraska, and how the UNL Libraries contributed to the organization of the portal's metadata records. The portal uses ESRI's Geospatial Portal Extension software.

10:45 AM-11:00 AM

CHARACTERISTICS OF GEOSCIENCE LIBRARIES AND ASSOCIATED TECHNOLOGY/USER-DRIVEN LIBRARY STRATEGIES: A SURVEY

DUNN, Lisa G., Arthur Lakes Library, Colorado School of Mines, 1400 Illinois St, Golden, CO 80401, ldunn@mines.edu

A 2009 survey of geoscience librarians provides qualitative information on librarians' roles as specialists, library collections, and the physical library's space and function within the organization. The libraries represented in the survey vary across mission, size, user population and budget. Respondents' perceptions of their libraries can help gauge the impact of technology and user expectations on decisions to manage library resources. Geoscience libraries, like most libraries, have experienced economic adversity and critical review of their value to the hosting

organization. This is very much the case for many libraries in the current period of severe economic downturn in the United States. However, in this case user behaviors and technological applications in the information industry have developed to the point where it is feasible for libraries and their organizations to see library services in different ways and respond accordingly. Web-based information tools, virtual environments, electronic publishing, digital archives and resource-sharing capabilities provide viable options to the traditional library, and encourage changes in the nature of the geoscience library.

11:00 AM-11:15 AM

PETROLEUM GEOSCIENCE LIBRARY HOME PAGE - AN INDIAN CORPORATE LIBRARY CASE STUDY

SRIVASTAV, Atul Kumar, Oil and Natural Gas Corporation Ltd, KDM Institute of Petroleum Exploration Library, Kaulagarh Road, Dehra Dun 248195 India, stulkumar19@yahoo.com

This paper details how the ONGC library, at the R&D institute, KDM Institute of Petroleum Exploration (Dehradun, India) has employed a hybrid approach to incorporating digital resources into a new homepage. Digital resources for libraries continue to grow at a fast pace. New “born digital” materials and digital conversion of older materials are altering the collection landscape in libraries worldwide. Collection management is complex. The same resources may exist in widely differing formats such as print, microfiche, microfilm, audio or video tape, floppy disk, CD-ROM, DVD and online. The information products of various geosciences societies and institutions such as SPE image library, OTC, Journal of Petroleum Technology, created on CD-ROM during nineties do not run on new machines with latest operating system. Online offerings for the petroleum geoscientist include various databases and web pages. Databases may provide bundled of resources covering specific years to varying degrees. Coverage also varies in content from full text to bibliographic citation plus abstract. Subscription costs, multiple resources on varying platforms, copyright issues and appropriate coverage all contribute to content management complexity. Our first step was to identify core petroleum geosciences information resources for our user base. To do this we conducted a citation analysis of fifty years of petroleum geosciences literature in combination with a questionnaire distributed to five hundred geoscientists and petroleum engineers from the Indian petroleum industry. Next we reviewed the scope and depth of e-content offerings. We examined federated search options and metadata elements for optimum content retrieval. The final product is our library home page which provides a single gateway to our information services.

11:15 AM Paper Withdrawn

11:30 AM-11:45 AM

USGS LIBRARY TRAINING AND OUTREACH: FINDING AND USING SCIENTIFIC LITERATURE AND DATA

WILD, Emily C., U.S. Geological Survey, Library, Box 25046, MS 914, Denver Federal Center, Denver, CO 80225, ecwild@usgs.gov

Scientists utilize interdisciplinary information sources from varied science and geographic areas. The U.S. Geological Survey (USGS) Library provides access and training for these sources that are continually developed. These internal training sessions and external outreach

activities are presented by USGS librarians to enhance dissemination of information to the USGS scientists, the geoscience community, and other librarians within the Rocky Mountains.

For the past two years, the USGS Library has provided internal USGS monthly training sessions online (national) and in person (local) on topics such as navigating USGS Library and USGS science area websites, access and use personal bibliographic software, electronic full-text documents, grey literature, geospatial data resources, USGS software, and USGS raw data. Currently, USGS librarians are developing nine training modules that will be available online to USGS employees. The presentation will provide an overview of the current USGS library training sessions and outreach activities, and address future collaborations within the geoscience and library communities.

11:45 AM-12:00 PM

E-SCIENCE AT THE UNIVERSITY OF MASSACHUSETTS

REZNIK-ZELLEN, Rebecca, Integrated Sciences and Engineering Library, University of Massachusetts Amherst, Lederle Graduate Research Center, 740 N. Pleasant Street, Amherst, MA 01003, reznikz@library.umass.edu and SCHMIDT, Maxine, Integrated Sciences and Engineering Library, University of Massachusetts Amherst, Lederle Graduate Research Center, 740 N. Pleasant Street, Amherst, MA 01003, mschmidt@library.umass.edu

In 2008, an Ad Hoc Committee of science librarians from the five campuses of the University of Massachusetts met to discuss the challenges of e-science and prepare the Libraries for their role in e-science initiatives. In order to effectively collaborate with and earn the trust of researchers generating data sets, librarians must be aware of research trends in their fields, and be familiar with the methodologies used in different disciplines. The committee decided to plan a series of events to inform and prepare science librarians to engage research faculty as a first step toward active participation in e-science projects. An initial effort was to establish our own set of Principles Fundamental to the Role of the University of Massachusetts Research Libraries in e-Science, modeled on the principles presented by the ARL Joint Task Force of Library Support for e-Science in its Report, "Agenda for Developing e-Science in Research Libraries" (Joint Task Force on Library Support for E-Science, Association Research Libraries, 2007).

As we began work on these projects, it quickly became apparent that even on the Ad Hoc Committee only a handful of librarians had formal science education or experience. Since then, the Libraries have organized three annual events to increase our awareness and knowledge base: a cross-campus Symposium each spring on e-Science designed to open a dialog between research faculty and librarians to identify and establish fruitful collaborations, a Professional Development Day, focusing on bench research of a single discipline or lab, and "Science Boot Camp for Librarians," a low-cost, regional professional development program designed as a casual but intensive immersion event into selected scientific subjects. Finally, we are identifying collaborative, data-intensive research projects already underway on and among our campuses.

(Session Abstracts continued on page 22)

LITERATURE REVIEWS



Carol J. La Russa

Kimball, Rusty, Ives, Gary, and Jackson, Kathy. (2010). Comparative Usage of Science E-book and Print Collections at Texas A&M University Libraries. *Collection Management*, 35(1), 15-28.

This study compares Texas A&M University (TAMU) Libraries usage data for print and corresponding electronic titles in the areas of physical sciences and technology. The electronic versions were provided through packages from NetLibrary, ebrary, and Safari. Currently TAMU Libraries acquire e-books through three models: 1) third-party host purchase model (NetLibrary), 2) third party host subscription model (Safari, Knovel, ENGnetBASE, etc.), and 3) direct purchase from publisher model (Springer).

Usage data from NetLibrary, ebrary and Safari were exported to spreadsheets and sorted to determine the most heavily used science and engineering titles. Statistics for both browses and check-outs of corresponding print volumes were then added to the spreadsheets. For the ten most heavily used NetLibrary titles the ratio of e-book to print use was 6.2 to 1. Chemistry-related ebrary books were used about 3.5 times more than the print versions. The authors note the great increases in e-book usage between 2006 and 2007 of CHEMnetBASE and other CRC products due to additions of individual volumes to the TAMU Libraries catalog, library instruction efforts, and their inclusion in library subject web pages. Seventy-six percent of NetLibrary books were not accessed, similar to the percentage for non-circulating print equivalents (77%).

As next steps the TAMU Libraries are experimenting with new methods of delivering content, including Kindle readers, and continuing to expand their purchases of e-books while blocking print books from some publishers on their approval plan. They have changed their acquisitions procedures to make e-book acquisition a normal part of the process.

Foote, Jody Bales and Rupp-Serrano, Karen. (2010). Exploring E-book Usage among Faculty and Graduate Students in the Geosciences: Results of a Small Survey and Focus Group Approach. *Science & Technology Libraries*, 29(3), 216-234.

The University of Oklahoma (OU) Libraries currently provide access to more than 500,000 electronic books. In the spring of 2009 nine faculty and nine graduate students participated in a study of e-book usage in the geosciences. The study consisted of an anonymous online survey followed by a one-half to one hour interview during which e-books provided on four platforms were examined. The results of the online survey indicated that 67% of faculty and only 33% of graduate students were very familiar with the electronic journals and databases provided by the OU Libraries. When offered a list of ways to learn about electronic resources 89% of faculty chose the Library web site with librarians the next most frequent option. Seventy-eight percent of graduate students chose the library web site with other students being the next most frequent option. Selecting from a list of thirteen types of e-resources, all participants indicated they use e-journals. Nearly all use online databases and locate e-books through the OU Libraries online catalog. Similar percentages of faculty and graduate students (44%) report using e-books. Only one participant, a graduate student, reported

reading an entire text online. Thirty-three percent of faculty and 44% of graduate students read chapters or sections online. Sixty-seven percent of faculty and 56% of graduate students prefer print books for longer reading.

In the interview portion of the study 38% of the faculty stated a preference for print books over e-books. The other 62% used e-books, but with reservations. Among the negatives of e-books listed by faculty was the need for electricity out in the field in order to use them. Faculty members want higher quality graphics, added color, and higher resolution for maps. Fifty-six percent of graduate students prefer e-books to print. They want e-books to have more functionality (videos, etc.), capability to download an entire book, and better resolution. Faculty preferred the Elsevier and Knovel platforms to those of Springer and ebrary. Graduate students were split on this topic. Issues noted during the interviews included lack of scrolling capability, confusion about what is being searched on the platform site (chapter, entire books, or entire database), need for better ways to manipulate graphics, and lack of knowledge of PDF capabilities (highlighting, snapshots, etc.).

Implications for publishers and libraries include need for better graphics (higher resolution) with more capabilities, the desirability of three-dimensional imaging, the need for both PDF and HTML formats, and better platform functionality.

Lercher, Aaron. (2010). Efficiency of Scientific Communication: A Survey of World Science. *Journal of the American Society for Information Science and Technology*, 61(10), 2049-2060.

In 2009 Lercher surveyed scientists to

measure the efficiency of current scientific communication and compares the results with earlier surveys. An efficient distribution is "one which allocates information so that research will not be improved by a new distribution." In particular Lercher is concerned about "late finds" or "late discoveries" of information that would have been useful earlier in the research process.

Participants were randomly selected from authors included in entries to the 2008 ISI Science Citation Index. More than 17,000 scientists were sent e-mail surveys; 578 of these were also sent postal surveys. Two-hundred sixty-two responses were received. Survey recipients were asked, "after beginning experimental work on your current research (or theoretical work if you work does not involve experiment) have you discovered in the literature any information you wish you had at the beginning of your project?" Forty-six percent of the respondents currently working on a research project answered that they had made late discoveries. Similar surveys of late discoveries have reported rates of 42% (2010, for high-income countries), 22% (1963-64, for British scientists), and 27% (1984-85, also for British scientists). The increase from 27% to 42% is certainly significant. Examining the demographics of the participants of Lercher's survey suggests the sample is not geographically representative with lower income countries are over-represented. The percentage of late discoveries for low- and middle-income countries is 56% and 42% for high-income ones. The adjusted rate should probably be 45% overall.

Scientists were also asked about the effect of late finds. For this survey the most common effect was that they would have planned their project differently (46%). Past surveys indicate most often that they would have saved time, money, or research effort (46%

and 43%). Responses to a question about why late finds occurred varied, including "did not make a systematic search" (27%), not yet published (24%), published in an unexpected place (13%), not available at the library (17%), not indexed as expected (12%), and other (7%). The current survey found six ways that late finds are commonly discovered are: attention was drawn to it by someone, it was cited as a reference, it was found by chance when looking through publications, it was found by search an abstract database, it was found through a database search of papers or bibliographic records, and it was found using Google or Google Scholar. In the findings section the author estimates costs of \$9,583 per late find.

In a follow-up question scientists were asked about the information resources available to them but there was not a statistically significant correlation with lack of resources and late finds. The final question asked about the number documents needed to start experimental (or theoretical) work. The mean was 31 and the median was 20. Further issues for study include the effect of the increasing size of scientific literature overall, the effect of large changes in media technology, and the effect of the increase in scientific specialization.

Harnad, Stevan. (2010). No-Fault Peer Review Charges: The Price of Selectivity Need not Be Access Denied or Delayed. *D-Lib Magazine*, v. 16(7/8).
<http://www.dlib.org/dlib/july10/harnad/07harnad.html>

In this opinion piece Harnad states that there are currently two ways to provide open access to journal articles. The first he calls "Green Open Access" in which authors are required to place the final peer-reviewed drafts of their articles in their institution's

open access depository. The second, "Gold Open Access," is when journals make their articles available free-of-charge to all and are financed by print subscriptions or by charging article publication fees. The problem with this second method is that the cost per article is very high when the costs of all accepted and rejected articles plus the costs of producing, distributing, and archiving are included. To provide open access now institutions and funders should immediately require Green Open Access. Once Green Open Access is universal there may come a time when there is no longer enough income from subscriptions to sustain journals because users are satisfied with depository versions. Journals could then cease their distribution and archival functions (relying on institutional depositories) and could generate income from peer-review charges for all submissions. The author believes that the reason selective journals have such a high cost per article cost is because it includes all the costs for both accepted and the high number of non-selected articles. Peer review charges would be paid by author institutions with savings from canceled subscriptions and might be on the order \$200 per round of review. Prior referee reports could included with later submissions of rejected papers. Harnad emphasizes that universal Green Open Access must come first before his Gold Open Access model is feasible.

Bracke, Marianne Stowell. (2010). Science and Technology Books on Demand: A Decade of Patron-Driven Collection Development, Part 2. *Collection Management*, 35(3/4), 142-150.

Bracke analyses science and technology books added to Purdue University Libraries collections through a project to purchase, rather than borrow, books requested through

interlibrary loan if the requests meet the following criteria: scholarly nonfiction works, published within the last five years, cost of no more than \$150, and available within a week from an online bookseller. The program began in 2000, and as of 2010, 15% (1,557) titles have been in the areas of science and technology. The aim of Bracke's study is to answer three questions: 1) Are the purchased titles in scope for their collection? 2) Did they fill gaps in the collection, especially interdisciplinary areas? 3) Were these titles relevant to the broader campus community and not just to the disciplines?

Books examined for this study were chosen by their relevant science and technology call numbers (1,201 titles) with 356 titles selected by science and technology librarians added. Circulation data was obtained for books classed in disciplinary call numbers. Only 4% (64) of the titles were judged not to be appropriate to the collection. Many were found to be interdisciplinary. Only 17% have not circulated since the initial loan and one third of these have been in the collection less than two years. Thirty-six percent have circulated more than five times. The author notes the large number of book purchases in these areas: computers and networking, environmental issues, and geographic information systems. She also notes the number of requests coming from non-disciplinary departments and from administrative units. She sees a need for further research to determine why the percentage of books purchased for science and technology is so low. The price limit does not seem to be a factor.

Marcial, Laura Haak and Bradley M. Hemminger. (2010). Scientific Data Repositories on the Web: An initial survey. *Journal of the American Society for Information Science and Technology*, 61(10),

2029-2048.

The number of scientific data repositories (SDRs) is growing with the explosion of "born digital" scientific data. Marcial and Hemminger take an initial look at web-based SDRs with the goals of taking an inventory of a sizeable sample (100) of SDRs, identifying their major characteristics, examining commonalities, looking at SDR trends, and looking for characteristics that may correlate with success. Data collection for the study began in 2007. One hundred forty-two SDRs were located through Google searches, 42 were judged unsuitable for this study, with 100 used for the final analyses. Initial data collection was done using the SDR web pages. Data from the initial collection were sent out to SDR administrators for review and comment in 2009. Fifty characteristics were identified for each SDR and 17 were considered to be suitable for statistical analysis. Data were collected for the following fields: scientific domain (broad subject area), research/community/reference (intended use), holdings size, government based SDR (yes/no), deposits and access (data submission policies), information representation (file types for ingest and export), ingest methods, metadata, usage statistics, business type (funding), memberships or subscription, preservation, and additional services provided.

Cluster analysis was used to group the SDRs into four groups: Governmental, Medicine/Small, University, and Community Biology. Trends observed in the data included the relative recency of most SDRs (only 22 existed before 1985), an increase in the number of SDRs with grant and contract support over time, and an increase in the number of SDRs with medium/broad holdings. Recommendations for the future include the creation of freely available open

(continued on page 26)

ADDITIONAL SESSION ABSTRACTS

Only three of the abstracts submitted to our session, T79. Geoscience Information Services: "Peak" Performances, were for posters, so I did my best to move them into appropriate poster sessions. There were also talks submitted that would not fit into T79. The submitted abstracts and corresponding sessions appear below.

J. Dombrowski, 2010 GSIS/GSA Technical Session Convener

Session No. 16

Sunday, 31 October 2010

8:00 AM-12:00 PM, Colorado Convention Center: Room 708

T80. Earth System Science in Museums: Tapping the Potential to Engage the General Public in the Complexity of the Earth

Paper # **Start Time**

16-1 8:15 AM

THE COLOR OF CONFUSION IN AN EXPERT WORLD

LIBARKIN, Julie C., Department of Geological Sciences, Division of Science and Mathematics Education, Michigan State University, East Lansing, MI 48824, libarkin@msu.edu, CLARK, Scott K., Department of Geology, University of Wisconsin-Eau Claire, 154 Phillips Hall, Eau Claire, WI 54702, and SIMMON, Robert B., NASA Earth Observatory, Sigma Space Corporation, 4400 Lottsford Vista Road, Lanham, MD 20706

The power of images to convey information about complex Earth systems is well known, as is the potential for misinterpretations to unintentionally arise from seemingly simple depictions. We report on an eye tracking- and interview-based investigation of expert-novice interactions with temperature maps, revealing striking differences in gaze behavior as a function of color palette and expertise level. Participants (n=28) determined to have color normal vision, were shown maps in three different design conditions depicting global monthly mean surface temperatures for March 2009. Each design condition employed a different color scheme, including the hue-based spectral scheme (rainbow), the lightness-based grayscale scheme (gray), and a lightness-based purple scheme (purple). Participants wore a Mobile Eye eye-tracking unit and were asked a series of protocol questions while viewing each of the three maps on a 24" monitor. Treatment effects were minimized through rotation of the order in which maps were shown to participants. Questions were preceded by an initial ten seconds of free viewing. Preliminary analysis of "first-viewed" maps indicates that both expertise level and design variables influence viewing behavior. While the cohort of experts attended to a set of common features (concentrated fixation pattern), novice gaze behavior was often circular and non-uniform (dispersed fixation pattern). Similarly, cross-cohort viewing patterns of the hue-based displays (rainbow) was different from the lightness-based (purple and gray) viewing behavior. For example, within the spectral condition, participants' gaze was attracted most to red portions of the display (areas of warm continental temperatures) and much less to the green areas. These data indicate that image design, even for simple temperature maps, does impact visual attention, and that experts exhibit image viewing behavior that is quite different from non-experts.

Session No. 108

Monday, 1 November 2010

8:00 AM-6:00 PM, Colorado Convention Center: Hall B

T17. Geologic Maps, Digital Geologic Maps, and Derivatives from Geologic and Geophysical Maps (Posters)

Authors will be present from 9 to 11 AM, and 4:30 to 5:30 PM

Paper # **Booth #**

108-51 248

QUICK AND EASY MAP MASHUPS

PROSSER, Cynthia L., Collection Development, University of Georgia Libraries, Science Collections - Science Library, University of Georgia, Athens, GA 30602, cprosser@uga.edu and PEREIRA, Monica, Reference, University of Georgia Libraries, Science Reference - Science Library, University of Georgia, Athens, GA 30602

Map mashups are an increasingly popular way of visually expressing spatial features and are a quick and simple way of presenting cartographic information without investing in a more powerful and formal GIS. Through map mashups, there is the ability to create a map that conveys pertinent and relevant information or data. The value of these mashups lies in the functionality and ability to meet specific requirements at the point of need. They can be created instantly as necessary, are particularly suited to using data already in extant, and provide a visual overview of the area of interest. They can be either informally or scholarly based. Map Builder, Wayfaring, and Google Maps are explored for their various functionalities.

Session No. 185

Tuesday, 2 November 2010

8:00 AM-6:00 PM, Colorado Convention Center: Hall B

T81. Geology in the National Parks: Research, Mapping, Education, and Outreach (Posters)

Authors will be present from 2 to 4 PM, and 4:30 to 5:30 PM

Paper # **Booth #**

185-12 181

DELIVERING INFORMATION on A MOUNTAIN-TOP: VIRTUAL INFORMATION SERVICES AT CRATER LAKE NATIONAL PARK SCIENCE & LEARNING CENTER

VELLA, Lia M., National Park Service, Crater Lake Science & Learning Center, PO Box 7, Crater Lake, OR 97604, Lia_Vella@partner.nps.gov

The Crater Lake Science & Learning Center (SLC), in operation for four years, is one of a network of 20 National Park Service (NPS) Research Learning Centers (RLCs) created to connect researchers with parks, and scientific information with park managers and the public. Crater Lake SLC is one of the few RLCs that include a research library. According to the NPS's 1999 Natural Resources Challenge Action Plan that led to the creation of RLCs in parks, information gained by scientific research in park must be disseminated as widely as possible:

“Once this information is in our hands, we must share it widely, so that child and adult, amateur and professional can benefit” (*Natural Resource Challenge: NPS Action Plan*, 1999). To respond to this mandate, the SLC has embarked on several information services projects: the Crater Lake Digital Research Collection online library, and Crater Lake NP Bibliographies, an internal database using Reference Manager Network software.

Because the Crater Lake SLC’s facility is not accessible during the winter months, it is critical to provide virtual access to information held in the library. To answer this need, the Crater Lake Digital Research Collection (<http://craterlakelib.oit.edu>) was created in partnership with Oregon Institute of Technology and partially funded by a Library Services & Technology Act (LSTA) grant. Items in this collection are available to the general public and can be found through standard search engine queries as well as the collection’s own search functions. Since many items held in the SLC’s library were not suitable for inclusion in the CLDRC due to information sensitivity or copyright issues, the internal Crater Lake NP Bibliographies database was created so that park employees can access records of all items held in the library’s physical collection; some full-text access is provided via in-house scans of management documents or via links to NPS-subscribed databases such as JSTOR. Links to items held in the CLDRC are also provided, thereby making Crater Lake NP Bibliographies a one-stop shop for park employees. It is anticipated that the database developed at Crater Lake SLC will be compatible with products of the NPS Resource Information Services Division’s current efforts to develop federated searching across multiple information systems.

Session No. 205

Tuesday, 2 November 2010

1:30 PM-5:30 PM, Colorado Convention Center: Room 107/109

T18. Reaching New Peaks in Geoscience: Geoscience in the Service of a Sustainable Future

Paper # Start Time

205-6 3:00 PM

FREEING POLAR DATA IN AN INFORMATION COMMONS WITH NEW TECHNOLOGIES AND NORMS OF SCIENCE

PARSONS, Mark A., National Snow and Ice Data Center, University of Colorado, UCB449 University of Colorado, Boulder, CO 80309, parsonsm@nsidc.org and DUERR, Ruth, National Snow and Ice Data Center, Cooperative Institute for Research in Environmental Sciences, University of Colorado at Boulder, Boulder, CO 80309

The polar regions are changing rapidly with dramatic global effect. Wise use of resources, astute management of our environment, improved decision support, and effective international cooperation on natural resource and geopolitical issues require a deeper understanding of, and an ability to predict change and its impact. Understanding and knowledge are built on data and information, yet polar information is scattered, scarce, and sporadic. Rapid change demands rapid data access. We envision a system where investigators quickly expose their data to the world and share them, without restriction, through open protocols on the internet. A single giant, central archive is not practical for all polar data held around the world.

Instead, we seek a collaborative, virtual space, where scientific data and information could be shared ethically and with minimal constraints. Inspired by the Antarctic Treaty of 1959 that established the Antarctic as a global commons to generate greater scientific understanding, the Polar Information Commons (PIC) serves as an open, virtual repository for vital scientific data and information.

An international network of scientific and data management organizations concerned with the scientific quality, integrity, and stewardship of data is developing the PIC. The PIC utilizes the Science Commons Protocol for Implementing Open Access Data, including establishment of community norms to encourage appropriate contributions to and use of PIC content. Data descriptions (metadata) are not necessarily registered in formal repositories or catalogues. They may simply be exposed to search engines or broadcast through syndication services such as RSS or Atom. The data are labelled or branded as part of the PIC and are, therefore, open for use without restriction. The PIC label also alerts data centers around the world to new polar data. These data centers then assess and acquire important data for formal archiving, curation, and access through national and global data systems. The intent is to enable rapid data access without qualification, while establishing a process for long-term preservation and stewardship of critical data.

This paper will review the ethical and legal basis for sharing polar data and information, as well as the new technologies being employed to make the PIC a reality.

Session No. 255

Wednesday, 3 November 2010

8:00 AM-6:00 PM, Colorado Convention Center: Hall B

T18. Reaching New Peaks in Geoscience: Geoscience in the Service of a Sustainable Future (Posters)

Authors will be present from 9 to 11 AM, and 4:30 to 5:30 PM

Paper # Booth #

255-3 157

SOLDIER-GEOLOGIST HYBRID: PART OF AN INNOVATIVE U.S. ARMY COUNTERINSURGENCY METHOD IN AFGHANISTAN

STEWART, Alexander K., Department of Geology, St. Lawrence University, Canton, NY 13617, astewart@stlawu.edu

In the spring of 2008 the National Guard Bureau, in conjunction with the U.S. Army, developed and began employing a new counterinsurgency tool in Afghanistan – Agriculture Development Teams (ADT). These specialized U.S. Army teams comprise 12 hand-selected, civilian-soldier experts in the Agribusiness field; supported by an organic security team and a headquarters element. As an egalitarian team, these civilian-soldier experts work directly with both regional and local Afghanistan government officials and farmers to support their agricultural needs. They provide agriculture-related education, training and sustainable projects, which are US funded and locally run.

The role of a geologist in these teams varies depending on the unit's deployed location and their commander's intent. For the Texas ADT II, geologists were generalists working in four areas: a) Hydrology, b) Education, c) Environmental and d) Agriculture. Hydrologically, control, conservation and management of the spring snowmelt from the Hindu Kush is vital to farming and livestock management, so delay-action dams, gabion structures and irrigation projects were developed. In response to village concerns, a dam assessment and hazard-mitigation program was also developed and implemented. Team geologists also help in watershed delineation and the selection of dam emplacement locations. With respect to Education, depending on the academic qualifications of the geologist, University-level support and training projects are also developed and implemented (e.g., field-based irrigation and soil science laboratories for university students). Environmentally, geologists are leaders in promulgating environmental education and supporting the nascent Afghanistan Environmental Protection Agency. Genuine geology-based projects were atypical due to overall security and time constraints; however, the Texas ADT II completed remote sensing of chromite mineral resources in their area of operation.

Overall, an ADT geologist is essential for mission success; however, the success of an ADT geologist is contingent upon the commander's understanding of what a geologist IS and DOES!

(continued from page 21)

source platforms for SDRs, the improvement of information sharing and access through metadata creation and standardization, and

the development of export, ingest, curation, archival and storage policies.

PUBLICATIONS AVAILABLE

Proceedings of the Annual GISIS Meetings (ISSN 0072-1409)

\$45.00 each; standing orders are \$45.00/year.

-v. 39, 2008 [published 2009], *Libraries in Transformation: Exploring Topics of Changing Practices and New Technologies*, ed. Lisa Johnston [978-0-934485-67-8]

-v. 38, 2007 [published 2010], *Geoscience Information: Making the Earth Sciences Accessible for Everyone*; ed. by Claudette Cloutier.

-v. 37, 2006 [published 2008], *Geoscience Information: Keys to Discovery*, ed. P.B. Yocum [978-0-934485-68-5]

-v. 36, 2005, [published 2007], *Collaboration for the Dissemination of Geologic Information Among Colleagues*, ed. by A. Fleming [0-934485-38-0]

GISIS Newsletter (ISSN 0046-5801) published bi-monthly; calendar year subscriptions only. United States and Canada \$40.00; other countries (via airmail) \$ 45.00

Mailing labels: Geoscience Information Society member mailing labels: Single use labels \$150.00.

Send orders to:

Ellie Clement
Cabot Science Library / Harvard University

One Oxford Street
Cambridge, MA 02 138

phone: 617.496.8442

fax: 617.495.5324

e-mail: clement@fas.harvard.edu

Payment must be made in U.S. dollars.