

newsletter

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PENNSYLVANIA STATEd Spi haus and Judy Holoviak gave us an extensive over-

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PRESIDENT'S COLUMN

by Michael M. Noga

Greetings! I spent most of May on preparations for moving our map collection to a smaller space in another part of the building. Above some of the built-in map cases was a huge trove of old topographic and other maps. I found sheets from series that I never knew that we had. Among the treasures was a rolled, mounted copy of the 1844 map of Boston. I had seen the 1844 map in an exhibition last year and had used it to prepare for my GIS field trip on the Boston shoreline. Little did I know that we had a copy. You just never know what you'll find in weeding projects.

March through May are big meeting months for GIS representatives to our affiliated organizations. In the April Newsletter, we had reports about meetings of the AGI Member Society Council and Geological Society of America Publications Committee. In April and May, GIS representatives participated at meetings of the GeoRef Advisory Committee, the AGI Earth Science Outreach Workshop, the Cartographic Users Advisory Council, AGI Geoscience Leadership Forum, the AGI Member Society K-12 Forum, and the AGI Government Affairs Program. Reports about these meetings will be found in this and the next issues of the Newsletter.

At the end of April, I joined Patricia Yocum (University of Michigan, Shapiro Science Library) and Eleanor Uhlinger (Marine Biological Laboratory/Woods Hole Oceanographic Institute Library) for an invitation to the first part of the American Geophysical Union's Publications Committee meeting in Washington, DC. On the first day,

of AGU's mission, history, support, and expenditures. On the second day, we met with the Publications Committee and AGU staff in an open dialogue about AGU publications. We talked about our concerns with pricing, including timing, consortial pricing, and package pricing. We talked about browsing, citations, and DOIs. You know about this issue if you receive paper copies of AGU journals in your library and you have seen the discussion on the Geonet. We also discussed linking articles with databases and articles from non-AGU journals. The last part of the meeting was a discussion of the need for a library advisory group for the Publications Committee. I hope that this will be the start of a better relationship between AGU and libraries. By the way, I was not attending this meeting as a GIS officer but as a librarian who has studied serials pricing for quite a while and who works at an institution with a major AGU constituency.

Before I go, I wanted to encourage you to think about giving a paper at the Topical Session that Lisa Dunn is organizing for the Denver meeting. If you have never given a talk or poster session, think about it now. I'm sure Lisa would be happy to talk to you about your ideas.

VICE PRESIDENT'S COLUMN

by Lisa Dunn

Call for Papers: This is a call for papers for the GIS Topical Session (T44) at the GSA Annual Meeting, October 27-30, Denver, Colorado. The Session's theme is "New Heights in Geoscience Information: Access and Technology." The submission deadline for abstracts is July 16. You can find submission forms and information on submitting an abstract at http://www.geosociety.org/meetings/ 2002/. The website includes Meeting information as it becomes available. You should also be getting an announcement for the Annual Meeting in "GSA Today" in the mail shortly. Please contact me if you have questions.

Our Topical Session covers a lot of territory when you think about it. Access to information is what we are about, whether it involves reference, indexing and cataloging, acquisitions, digitization, preservation, publishing and prices, or other of our many interests. Technology is one of our

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GIS members are encouraged to contribute materials for publication. Material for the August, 2002 issue should be received no later than July 26, 2002. If possible, please send materials by e-mail.

most powerful tools for managing information. We measure our effectiveness by evaluating how information users respond to our efforts in these areas. This is a fascinating time for geoscience information—much of the technology in our reach is no longer unfamiliar in concept and we are seeing the results of creative applications and new practices that change our jobs and information users' behavior. The Topical Session is a great venue for sharing your experiences and developments!

GIS Professional Issues Forum: We usually sponsor a forum near the end of the Annual Meeting to discuss professional issues of choice; this is also a time to provide feedback on how the meeting is going. This year I am looking for:

* A Forum chair to launch the discussion and introduce topics

* Issues that you (the membership) would like to discuss If you are interested in acting as Professional Issues Forum chair, or have suggestions for discussion, please let me know.

Finally, a little logistical information: Groundbreaking for the expansion of the Colorado Convention Center took place in April of this year. The projected finish date is December 2004, so obviously we may be working around a little construction. (You can look at the construction progress live at www.denver.org/planners/cce.htm: right now it's a dirt lot.) I will try to keep you updated on any changes that affect us.

Many of you will be flying into Denver via Denver International Airport (DIA). It hasn't gotten any smaller, or closer to Denver. The best way to get into Denver is by shuttle service or car rental. Be sure to plan for delays caused by the increased security; right now the delays are fairly manageable but conditions can change.

MID-YEAR REPORTS

Appointees

Homepage Editor

On May 3, a newly designed GIS website was released. Have a look at http://www.geoinfo.org/

Respectfully submitted, Jim O'Donnell

Committees

Archives Committee

Thanks to Lura Joseph, the archives of GeoNet-L (January 1993 - March 2001) are available and searchable at: http://g118.grainger.uiuc.edu/geonet/archive.asp

A graduate student at the University of Illinois, Cindy Mader, worked on the project. She populated an Access database with the GeoNet-L archive messages, and created the search program. The site also includes a link to the GeoNet archives at Purdue (March 2001-present): http://www.lib.purdue.edu/listarchive/geonet/

Respectfully submitted, Mary Krick, Chair

Best Paper Committee

Committee members are searching databases and other sources to locate papers for consideration. The chair has placed calls for additional nominations in the GIS newsletter and on the GEONET listserv. We are accepting nominations until June 1. The committee will be rating all nominated papers during the month of June and plans to have chosen the best paper by mid-July.

Respectfully submitted, Thelma Thompson, Chair

Membership Committee

The committee includes Miriam Kennard, Sally Scott, Elizabeth Wallace, and Connie Manson (chair). The areas of geographic responsibility have been assigned, the revised membership brochures have been distributed, and the committee members are looking for new GIS members. If you know of potential candidates, please let any of us know.

Respectfully submitted, Connie Manson, Chair

Preservation Committee

The preservation committee is continuing to get organized for this year's work. Current committee members are Kristi Jensen (chair), Regina Brown, Pauline Kamel, Mary Scott, and Susan Skinner. Initial e-mail contact has provided several possible initiatives for the year: providing information about new GIS member preservation projects via the GIS newsletter, annotating recent publications related to preservation in the GIS Newsletter, updating the Preservation Committee web site and providing for its inclusion in the main GIS site, and finally, determining the content/subject of a preservation forum at the Annual Meeting in Denver.

Respectfully submitted, Kristi Jensen, Chair

Union List of Field Trip Guidebooks Committee

The procedure for adding new titles to the Guidebook database http://www.georef.org/gnaintro.html has changed. GeoRef workers will now be adding new titles to the database and to GeoRef. Currently, GeoRef staff members are working through the backlog of surrogates already submitted to GIS. GIS has agreed to keep AGI informed about new guidebooks by maintaining a waiting list of titles that are not yet in the guidebook database. GIS members, as well as other interested individuals, can submit information regarding new guidebooks they acquire, and the information will be added to this waiting list. GeoRef will periodically request loans of guidebooks on this list for input into Geo-Ref and the guidebook database.

We are still working out the details for this new system. When the procedure has been finalized, a message will be posted to GeoNet. Until then, to add titles to this waiting list, use the Web Form at http://www.library.uiuc.edu/gex/gis/GuidebkForm.html. Please submit only those titles

published after 1999. If you are unable to use this form, send the information to luraj@uiuc.edu. Your title will be added to the list at http://www.library.uiuc.edu/gex/gis/GuidebookWL.html within a few days.

Respectfully submitted, Lura Joseph, Chair

Representative Report: AGI Earth Science Week Planning Meeting, April 22, 2002

The meeting was opened by M. Ray Thomasson, AGI President Elect. He stressed the need to bring earth sciences out in the open. He stated the objective of the day's meeting was to provide information about effective current outreach programs by other groups, designing and developing new approaches, and harnessing the power of the media.

USGS Director, Chip Groat, then spoke on the growing need for people to understand the importance of earth sciences and how we must effectively communicate their value and relevance to the world. Major issues include why it is important for the rest of the world to understand geosciences, communicate the fact that hazard awareness (volcanoes, earthquakes, storms, etc.) is as important for the public to understand as issues in the health sciences. Other issues that need to be effectively communicated are the wonders of space and the beauty of earth systems and the everyday aspects of the geosciences.

AGI Director of Education, Mike Smith, spoke on the format of the meeting and the need to take Earth Science Week (ESW) to the next level.

Following Mr. Smith, representatives from organizations that have successful outreach programs spoke. Here are highlights from those discussions.

- ♦ Cindy Workosky from the National Science Teachers Association spoke on ways to engage the media.
- Gretchen Klein from the NSF Gender Equity Programs spoke on the status of women in science and engineering.
- David Harwell from the American Chemical Society spoke on National Chemistry Week and how they have built their program.
- Elaine Lewis and Carolyn Ng from NASA Goddard Space Flight Center spoke on the events surrounding National Sun-Earth Days.
- ♦ Jim Wood from the National Parks Service spoke on Earth Science Week at the national parks. He mentioned how few geologists there are in the park service (I think it was 68 out of 23,000).
- Pixie Hamilton from the USGS spoke on National Water Monitoring Day, which takes place in the middle of Earth Science Week.

After lunch in the USGS cafeteria the group split into three groups. Each group was given a set of questions to brainstorm. I attended the group that was to determine ways to expand the participation in Earth Sciences week by AGI member societies. Our discussion questions were: how do we increase participation, how do we formalize participation, and how do we recognize participation?

The three groups reconvened to present the highlights of their discussions.

Scope Group

- * materials should be interdisciplinary not just geology
- * curricular materials must be tied to standards
- * ESW projects should serve as a kickoff to a longer project
- * develop guides for teachers
- * develop guides for local organizers (ACS had a "handbook for success" for National Chemistry Week)
- * develop logos and preformatted event posters that organizations can easily pull off the web
- * print and web material

Participation Group

- * have links between member society web sites and ESW web site
- * highlight and clarify benefits of ESW to the member society and understand the unique skills and capabilities the member societies can bring to ESW
- * develop lists of what is going on for ESW in other communities
- * increase collaboration
- * AGI should have a model press kit with some template press releases
- * develop corporate sponsorship
- * each member society should have an outreach chair
- * AGI should hold forums and create an Outreach Advisory panel that would consist of the member society outreach chair and any appropriate staff, that forum should take place more than once per year.
- * collect a history of the involvement of the member society in ESW
- * recognition would include certificates and luncheons
- * tool kits need to be developed to help facility the exposure to ESW with AGI acting as a clearinghouse for a number of materials
- * other organizations should be involved to stress the interdisciplinary nature of the geosciences

Themes for the Future Group

- * Geosciences in the National Parks
- * Geological/Natural Hazards
- * Soil
- * Water
- * Air *Recycling
- * Develop broad themes with local adaptability Respectfully submitted, Liz Mengel, Johns Hopkins University

NEWS FROM THE USGS LIBRARIES

by Nancy Blair, Chief Librarian

The USGS Library Services Group will become part of the Geographic Information Office effective October 1, 2002. The libraries have been under the administration of the Geologic Division since the beginning of the USGS. We served all employees, but because of our placement, we were often considered "Geologic's Library" and not Water's or Mapping's Library. The new organization will ensure that we are regarded within the USGS as the USGS library system. The new Geographic Information Officer Karen Sideralis has much the same job as the Chief Information Officer in other agencies. Her office will combine Information Technology, Information Management, and Information Services, all formerly placed in different parts of the USGS. The library system will be part of Information Services with the ESICs (map sales offices) and other units answering information requests internally and for the public. We will be doing a review of library organization with management as we join the new office, but do not expect any major changes. We hope to provide faster, easier, and integrated access to all USGS information with the new organization through coordinating the various information functions long kept separate.

The present Administration has set high goals for "outsourcing" or "contracting out" by government agencies. Those who are really interested in the subject can go to the Office of Management and Budget (OMB) website: http://www.whitehouse.gov/omb/circulars/index.html and select Circular A-76 with its amendments. A-76, first issued in 1966, directs government agencies to avoid competing with the commercial sector by contracting out government jobs when possible to private companies according to evaluations and procedures described in the circular. In 1999, one

of the additions to A-76 was the annual FAIR inventory which requires agencies to review all jobs and code them as "inherently governmental" or "commercial". Being rated "inherently governmental" means that the function is least likely to be considered for outsourcing. A-76, for more than thirty years, has always listed libraries as candidates for contracting out and this has been periodically a concern for federal libraries. Many libraries such as the Department of the Interior and NASA are contract libraries. The USGS library system is not on the list for contracting out this year and many of our positions are listed in the present inventory as "inherently governmental". Publishing functions including printing and editing, map sales (not the information part of the ESICs), warehousing jobs, and visual services are on the list for outsourcing consideration this year. Government employees are allowed to compete in the bidding for their own section. It usually takes 12-18 months processing and researching before the job function is actually put up for bid.

The USGS library system, since 1999, is funded as a constant percentage of the overall USGS budget, so we are no longer subject to sudden cuts, except as the USGS budget itself rises or falls in Congress. We are exposed to increasing salary costs, rising costs of journals, and the high costs of electronic access to popular publications. This year we are cutting multiple copies of many journals relying on faster delivery to USGS users across the country with digital copiers allowing us to send e-mail scanned copies as well as using fax and express mail. We will cut a handful of single subscription journals which have been judged too general and not used and will add a few titles, primarily in ecology or environment fields, that are frequently requested.

LITERATURE REVIEWS

by Carol J. La Russa

Cecelia Brown and Lee R. Krumholz describe a study of an attempt to improve student information literacy competency levels in their article in *College & Research Libraries*. Brown, a librarian, and Krumholz, a professor, collaborated on activities for a geomicrobiology class. Using the Association for College and Research Libraries' *Information Literacy Competency Standards*, Brown developed a pre-instruction questionnaire, library instruction sessions, assignment checklists to evaluate the effectiveness of the library instruction, and a post-instruction self-assessment. Unfortunately although students report they improved their information seeking skills this was not reflected in their actual performance in class. The authors believe instruction in time management and improvements in library instruction methods might help this situation. ("Integrating Information

Literacy into the Science Curriculum," v. 63, no. 2, 2002, p. 111-123).

In another article on library instruction, Michael Fosmire shows how librarians can use the newly popular problem-based learning method as a catalyst for faculty-librarian partnerships. Problem-based learning is "a learning technique where in the learning takes place in the context of solving real-world problems." Information literacy competency is needed to satisfactorily attain the course goals. Fosmire describes Purdue University's LEADER (Learner En-Abled Digital EnviRonment) project that seeks to promote information skill literacy for students in science and technology. After faculty recruitment efforts two classes with problem-based learning assignments were chosen as pilot projects. One class was an introductory earth and atmos-

pheric sciences freshman survey course; the other a science and society class. Librarians developed laboratory sessions for the classes to teach information literacy skills in the context of student assignments. ("Riding the Active Learning Wave: Problem-Based Learning as a Catalyst for Creating Faculty-Librarian Instructional Partnerships," *Issues in Science and Technology Librarianship*, Spring, 2002, www. istl.org/02-spring/article2.htm).

Also in Issues in Science and Technology Librarianship Jane Quigley, David R. Peck, Sara Rutter, and Elizabeth McKee Williams describe the results of their survey of 230 science faculty and researchers at the University of Michigan regarding which information resources they find useful in the context of particular types of information needs and the factors that affect their choices of these resources. Information needs surveyed were: current research developments, routine research information needs, thorough literature searches, and finding information in new or lessfamiliar areas. The factors affecting selection were: least time, most convenient, most current, most authoritative, most familiar, and most reliably available. Faculty were asked to select three of the factors. "Most convenient" and "least time" were the most frequently cited reasons for resource selection. For current research developments the most commonly cited resource was browsing recent issues of print journals with attending conferences, etc. a close second. For routine research needs, for thorough literature reviews, and for finding information in new areas, abstracting and indexing databases were most frequently mentioned and using citation trails next most frequently. ("Making Choices: Factors in the Selection of Information Resources Among Science Faculty at the University of Michigan: Results of a Survey Conducted July-September, 2000," Spring, 2002, www.istl.org/02-spring/refereed.html).

Mark Needleman explains OpenURLs in his article in Serials Review. URLs (Uniform Resource Locators) refer to one location on the Web. But the same resource can be located in many places; some of which may not be accessible by a particular user. The Open URL system works as follows: OpenURLs are used instead of URLs on Web pages. When an item is selected, the OpenURL is sent to a resolution service that knows what the user can access and where to do it. The resolver shows the user appropriate sources and allows the user to choose. The actual source does not have to be electronic. It could, for example, be a document

delivery service. Needleman also shows the syntax for creating OpenURLs. ("The OpenURL: An Emerging Standard for Linking," v. 28, no. 1, 2001, p. 74-76).

Philip M. Davis updates a paper published in 2001 in the Journal of the American Society for Information Science and Technology in "The Effect of the Web on Undergraduate Citation Behavior: A 2000 Update." The author examined the citations in term projects completed for an undergraduate economics class for the years 1996, 1999, and 2000. Citations were coded by type of reference: book, journal, magazine, newspaper, Web, and other. Traditional print materials were coded as print even if available on the Web. Davis also checked the accuracy and persistence of Web citations. Interesting findings include that the size of bibliographies has increased but nearly all of this is due to more use of non-scholarly sources (Web sites and newspapers). In 2000, 65% of Web citations pointed directly to a cited document as compared with 55% in 1999 (probably due to greater accuracy due to a change to electronic submission of papers). In 2000, 13% of cited Web documents were found at a different URL compared with 19% in 1999. In both years 16% of cited web documents were not findable. Davis sees a need for professors to provide clearer instructions for assignments. Also librarians should collaborate with faculty to develop research guidelines for students. (College & Research Libraries, v. 63, no. 1, 2002, p. 53-

Julia Martin and David Coleman write in the *Journal of Electronic Publishing* that librarians should conceptualize the archive as a living ecosystem that is constantly adapting to a changing environment. Change will always be a part of the electronic archive environment; there will be no permanent solutions. Strategies include preservation of print copies when appropriate, migration of electronic data to new systems, cloning of electronic archives, and distributed storage of the clones. ("The Archive as an Ecosystem," v. 7, no. 3, 2002, www.press.umich.edu/jep/07-03/martin.html).

The March issue of College & Research LibrariesNews has an article by Patrick M. Bickers about using various Web sites to acquire out-of-print books. He describes how the University of Missouri-Kansas City uses these sites to successfully acquire 61% of requests for out-of-print books. Other requests remain on want lists. ("New Ways to Acquire Old Books: Adding Out-of-Print Titles to the Library's Collection," vol. 63, no.2, 2002, p. 173-175+).

CARTOGRAPHIC NOTES

by Linda Zellmer and Clara McLeod

Recently, Clara McLeod and I discussed the possibility of developing a column for the GIS Newsletter that would discuss matters related to maps and spatial data. As the Geoscience Information Society's representatives to the Cartographic Users Advisory Council (CUAC), we would like to provide information related to USGS mapping activities and answer questions received about cartographic information. This will be our first column related to cartographic materials. Through this column, we hope to provide answers to questions related to maps and spatial data and communicate information on CUAC activities and concerns.

CUAC is an organization made up of representatives from library organizations that deal with cartographic information. There are presently 12 members, two from each of the major national and regional cartographic organizations. Every year, the Council meets with representatives from Federal government mapping agencies to learn about agency activities. The CUAC members also represent the needs, interests and concerns of cartographic information users to the Federal agencies.

1. What should be said to faculty who are concerned about the availability of different formats of USGS maps? Will there be the same amount of paper, more digital, both or total digital?

The consensus seems to be that maps will exist in those dual formats for the foreseeable future and some topographic maps will continue to be available. The USGS representative to CUAC announced that map sales have been discontinued at the Reston, VA Earth Science Information Center (ESIC). Retail sales may cease at other USGS locations as well.

2. How is the USGS ensuring that depository copies of newly published USGS publications are being distributed correctly? Specifically, the Library of the Washington Geological Survey has experienced difficulty in receiving copies of these because they are being sent from local distribution offices rather than a central one.

This concern was discussed with the USGS representave and the GPO representative. The Government Printing Office representative will investigate.

3. The VMAP1 and 0 data are distributed through the Geo-Engine site; but the question has come up-will that data be distributed via CD through the Depository Program?

The NIMA representative stated that if the library selects this item, it will be sent to them. The products are on CD.

OMB Memorandum M-02-07

After the CUAC meeting, several members noticed newspaper articles concerning OMB Memorandum M-02-07 (URL: http://www.whitehouse.gov/omb/memoranda/m02-07.pdf), which could allow Executive Branch agencies to bypass the Government Printing Office and contract their printing with private companies. This could impact the information libraries receive through the Federal Depository Library program. CUAC continues to monitor activities regarding this proposal. For more information, see the discussion Govdoc-L archives (http://lists1.cac.psu.edu/archives/govdoc-l.html), especially the first two weeks of May, 2002.

New USGS Products

The USGS recently announced the publication of several new maps and geologic resources. They include:

Maps

- * Geographic Face of the Nation-Land Cover (Stock number: 112765, Price: \$7 plus a \$5 handling per order). Scale: 1:4,000,000
- * Shaded Relief Map of North America (Stock number: 112733, Price: \$7 plus a \$5 handling). Scale: 1:10,000,000
- * Ecoregions of Alabama and Georgia (Stock number: 112766, ISBN: 0-607-98485-6, Price: \$7 plus \$5 handling)
- * Ecoregions of Idaho (Stock number: 112767, ISBN: 0-607-98585-2, Price: \$7 plus \$5 handling).

Publications

- * Elevations and Distances in the United States. General Interest Publication (Stock number: 16419, Free). Also available online at: http://mac.usgs.gov/mac/isb/pubs/booklets/elvadist/elvadist.html
- * Fossils Through Time poster (Stock number 16564, Price: \$7 plus \$5 handling charge)
- * Topographic Map Symbols (Stock number: 100799, Free).

These maps and publications can be ordered from: USGS Information Service, Box 25286, Denver, CO 80224. FAX: 303-202-4693.

GEOSCIENCE JOURNAL PRICES

compiled by Michael M. Noga

This list is a continuation of the journal price list that was published in the February GIS Newsletter. Prices come from invoices, serial vendor databases, publisher's Web sites and price lists, and journal issues. Prices vary, depending on the subscription source and payment date, especially for journals not priced in US dollars. Each price history comes from a consistent source as much as possible. Journals are included if the subject fits broadly in the geosciences and sufficient price data are available. The latest title of each journal are used.

As usual, the percentage increase has dropped with the addition of prices from more society journals and publications from government agencies. In the February issue, the percentage increase for 2002 journals was 8.79%. With the addition of the following journals, the percentage drops to 6.83%.

		A Aller	Price	Percentage Change					
TITLE	1997	1998	1999	2000	2001	2002	99/00	00/01	01/02
Acta Geologica Hispanica	38	33	35	30	28	27	-14.3	-6.7	-3.6
Acta Oceanologica Sinica	420	420	420	420	430	420	0	2.3	-2.3
Acta Palaeontologica Sinica	50	50	55	55	60	60	0	9.0	0
Alcheringa	86	76	61	65	57	64	6.6	-12.3	12.3
Annales Societe Geologique du Nord	42	40	43	37	34	33	-14.3	-8.1	-2.9
Annual Review of Earth Planetary Sci	140	140	140	148	148	165	5.7	0	11.5
Astronomy and Geophysics	161	195	195	223	225	225	14.3	.9	0
Boletin Geologico y Minero (ITGME)	47	41	43	39	34	32	-9.3	-12.8	-5.9
Bulletin de la Societe Geol France	140	126	135	121	107	111	-10.4	-11.6	3.7
Bulletin of Canadian Petroleum Geol	60	68	81	95	140	88	17.3	47.4	-37.1
Butsuri Tansa (Geophysical Explora).	240	240	173	204	214	191	17.9	4.9	-10.7
Canadian Journal of Earth Sci	510	556	612	655	701	747	7	7.0	6.6
Chemie der Erde	195	198	229	218	207	244	-4.8	-5.0	17.9
Chishitsugaku Zasshi (J Geo Soc Jpn	319	319	229	285	299	268	24.5	4.9	-10.4
CIM Bulletin	150	150	160	170	170	180	6.3	0	5.9
Clay Science	70	78	55	66	70	62	20	6.1	-11.4
Climate Dynamics	n/a	1196	1368	1491	1593	1779	9	6.8	11.7
Climatic Change	1034	1001	1073	1276	1353	1475	18.9	6.0	9.0
Coral Reefs	294	382	416	438	468	479	5.3	6.8	2.4
Earth Planets and Space	n/a	298	315	330	350	370	4.8	6.1	5.7
Episodes	24	24	24	24	24	24	0	0.1	0
European Journal of Mineralogy	301	279	299	268	255	277	-10.4	-4.9	8.6
Exploration Geophysics	134	122	117	124	126	119	-10.4		-5.6
Facies	95	95	85	85	75			1.6	-5.3
Geochronique	52	49	53	49		71	0	-11.8	
Geodiversitas	154	133	178		43	47	-7.5	-12.2	9.3
Geomagnetism & Aeronomy	555	623	675	154	149	136	-13.5	-3.2	-8.7
GFF: Geologiska Foren Forhandlingar	72	75	75	745	834	910	10.4	11.9	9.1
Ground Water Monitoring & Remed	58	70	77	73	60	60	-2.7	-21.7	0
International Geology Review	985	985		79	79	92	2.6	0	16.5
Izvestiya Atmos & Oceanic Physics	605		985	985	1049	1099	0	6.5	4.8
fishin (Bull Seismological Soc Japan)	273	605 294	735	870	1058	1155	18.4	21.6	9.2
Journal of Glaciology	274	294	215	197	244	238	-8.4	23.9	-2.5
ournal of Mineralog & Petrol Sci	50		295	308	299	291	4.4	-2.9	-2.7
ournal of Physical Oceanography	345	50	50	50	50	50	0	0	0
ournal of Quaternary Science		380	405	420	425	445	3.6	1.2	4.7
ournal of Seismic Exploration	575 250	655	825	905	955	1090	9.7	5.5	14.1
Cazan (Bull Volcanol Soc Japan)		264	287	283	269	277	-1.4	-4.9	3.0
Kozan (Bull Japn Mining Ind Assoc)	293	288	211	249	288	234	18	2.8	-8.6
ethaia	132	130	94	111	116	104	18	4.5	-10.3
Lithology and Mineral Resources	179	180	189	199	210	220	5.3	5.5	4.8
Malacologia	1485	1595	1725	1950	2260	2463	13	15.9	9.0
B.4	55	55	55	55	70	70	0	27.3	0

	Price						Percentage Change		
TITLE	1997	1998	1999	2000	2001	2002	99/00	00/01	01/02
Marine Geophysical Researches	637	605	691	688	657	688	-0.4	-4.5	4.7
Mineralogical Magazine	225	270	295	326	326	366	10.5	0	12.3
Mining Journal	395	415	428	440	462	478	2.8	5	3.5
Mining Magazine	90	94	97	100	110	115	3.1	10	4.5
Netherlands Journal of Geosciences	250	252	280	265	265	265	-5.4	0	0
Neues Jahrb Geol Palaeo Monatshefte	568	498	554	499	470	467	-9.9	-5.8	-0.6
Neues Jahrb Mineral Monatshefte	673	442	486	468	428	478	-3.8	-8.5	11.7
Northern Miner	82	87	87	87	87	87	0	0	0
Oceanology of Russian Academy Sci	539	539	705	720	806	1034	2.1	11.9	28.3
Oil and Gas Journal	145	145	154	154	154	154	0	0	0
Oregon Geology	10	10	10	10	10	10	0	0	0
Palaeontology	175	175	190	200	204	204	5.3	2.0	0
Palaontologische Zeitschrift	86	78	84	72	99	91	-14.3	37.5	-8.1
PaleoBios	15	15	20	20	20	20	0	0	0
Polar Record	132	138	144	150	160	176	4.2	6.7	10.0
Polar Research	31	27	26	63	57	56	142.3	-9.5	-1.8
Quaternary Research	340	380	430	486	545	580	13	12.1	6.4
Revista Espanola de Paleontologia	92	79	84	73	67	71	-13.1	-8.2	6.0
Rivista Mineralogica Italiana	45	60	60	60	60	60	0	0	0
Schweiz Mineral und Petrol Mitteilungen	198	172	187	168	155	151	-10.2	-7.7	-2.6
South African Journal of Geology	100	130	140	150	175	175	7.1	16.7	0
Southeastern Geology	23	24	25	25	26	28	0	4.0	7.7
Tellus	321	272	292	283	260	257	-3.1	-8.1	-1.2
Trans Royal Soc Edinburgh Earth Sci	170	170	178	195	185	189	9.6	-5.1	2.2
Veliger	72	72	72	72	72	72	0	0	0
Zeitschrift Deutsch Geol Gesellschaft	, n/a	178	203	175	169	155	-16	-3.4	-8.3

n/a = not available or not applicable

Total number of titles from lists in February and June 2002 GIS Newsletters: 240

Average Price Change: 1999/2000 6.77 % 2000/2001 5.44% 2001/2002 6.83%

MEMBER NEWS

As of June 3rd, **PHIL STOFFER** will be moving from one Menlo Park office to another-- from the USGS-Menlo Park library to geologic webmaster for the USGS Western Earth Surface Processes team.

Dear GIS Friends,

Greetings from Columbus, OH. For those of you who may not know, I am enjoying a very pleasant, stress-free retirement from OSU. Last Fall I waved goodbye to Orton Hall and hello to a wonderfully carefree life. The past few months I have made several trips to South Carolina to visit my new grandson. Michael is now six months old, 18 lbs.,

28 in. tall...shouldn't he be getting a job?!! I recommend leisure living. Now I have time to read, pull weeds (yes, I enjoy the exercise!), attend tennis and golf matches. hunt for antiques, catch up on my letter writing, and generally get into mischief. If

you are ever in town (I know, people don't usually select Columbus as a vacation site), please visit (phone: 614/451-8989, e-mail: rabrown@columbus.rr.com). I'd love to see you. I have enjoyed your friendships and appreciate the networking. Best wishes for continued success in your information-laden careers!

Affectionately, Reggie Brown

Head of Science and Technology Libraries, Syracuse University Library, Syracuse, NY

Position Summary: Syracuse University Library seeks a creative individual with outstanding leadership, management, and organizational skills to direct the Science and Technology Libraries, one of six departments and programs within the Research and Information Services Division. The head of the Science and Technology Libraries plans, develops, implements, and administers programs and services that support the University's academic and research activities in the sciences. In addition, the successful candidate will play a key role in planning and implementing a major building expansion project that will result in the relocation of most science and technology collections and services from the Science and Technology Library and selected branch libraries to the main campus library (E.S. Bird Library). Reports to the Head of the Research and Information Services Division.

Duties: As a member of the Library's management team, lead and manage a staff of five librarians, a supervisor, and eight support staff members in the Science and Technology Library, and Mathematics, Geology, and Physics branches in the provision of access, reference, instruction, and collection development services for research-level collections in the sciences.

- -- Direct operations in Science and Technology Library and Mathematics, Physics, and Geology branch libraries; manage departmental operating budget
- -- Work collegially with public services division and department heads to develop and implement effective service delivery
- -- Foster positive relations with faculty through visible and proactive outreach and faculty liaison activities
- -- Provide leadership in the development and implementation of new digital initiatives and other elements of the Library's strategic plan
- Coordinate and deliver user support including reference desk (includes some evening and weekend duty), consultation, electronic reference services, library instruction
- -- Serve as science team coordinator for collection development, and serve as selector for general science collections
- -- Oversee the coordination of relevant technical services procedures between the Science and Technology Libraries and the Bibliographic Services Division
- -- Lead staff in planning for integration and consolidation of science collections and services into expanded E.S. Bird Library
- -- Serve on the university librarian's Cabinet, working closely with other department heads and administrators on long term planning and policy development, and on creative solutions to current library/information issues
- -- Serve on Library and University committees as appropriate

Qualifications: Required: MLS (ALA accredited) or equivalent combination of education and experience is required; 4 years experience providing reference services in an academic or research library; proven success in supervising, leading, and evaluating full-time staff. AND best combination of the following: experience supervising librarians; strong commitment to user services; demonstrated success providing high quality reference services in a science or science-related discipline; knowledge of emerging trends in library technology; demonstrated success in outreach and faculty liaison activities; excellent interpersonal skills; effective oral and written communication skills; demonstrated leadership skills; ability to develop and lead effective teams; ability to work cooperatively in a demanding and rapidly-changing environment; creativity and innovative thinking;

analytical, problem solving, and planning ability; effective organizational and time management skills; experience building print and electronic collections; academic background in science or related discipline; experience with resources and services for science disciplines; commitment to providing responsive and innovative services to a culturally and racially diverse campus; experience with building space planning and programming; advanced degree in a science- or technology-related field; evidence of professional/scholarly activity.

Environment: Syracuse University, founded in 1870, is an independent Research II University and a member of the Association of American Universities. Its thirteen schools and colleges include a number of nationally ranked programs and serve a population of over 10,000 undergraduate and 5,600 graduate and law students. The Syracuse University Library comprises a large central library and 5 branch libraries serving a diverse community including 800 faculty and many visiting researchers. The libraries hold almost 3,000,000 volumes, with significant special collections, and extensive electronic resources. The Library's annual budget is \$10.7 million. The Library has a staff of 46 librarians and 135 support staff. For information about the Library's Strategic Plan see: http://libwww.syr.edu/information/ trategicplan/index.html. The Library is a member of the Association of Research Libraries, the Research Libraries Group, OCLC, and national and regional consortia. It is committed to the development of digital resources and is working actively to initiate new digital programs. Library staff members are committed to providing excellent and responsive services to a culturally and racially diverse camus. The University has acknowledged the growing role of the Library by approving ten additional professional posiions this year and a major building expansion. Syracuse is located in the center of New York State within reach of New York City, Boston, Philadelphia and Toronto. Local cultural opportunities include a symphony orchestra, jazz

festival, chamber music society, nationally recognized art museum and an Equity theater, along with excellent opportunities for sports and recreation nearby. Salary and Benefits: Minimum salary \$60,000. The University's generous benefits package includes an 11% contribution to TIAA/CREF, health and dental plans, tuition remission, adoption assistance, insurance, and other work/life options and benefits. Contact: Send letter of application, resume, and names of three references to: Search Committee for Head of Science and Technology Libraries, Syracuse University Library, Syracuse University, Office of Human Resources, Skytop Building, Syracuse, NY 13244-5300. Applications received by May 31, 2002 will receive first consideration.

Science Librarian, University of Oregon Libraries, Eugene, OR.

Reports to the Head of the Science Library. Responsibilities include in-depth reference service in a full range of life and physical sciences, mathematics, and computer sciences. Provides library and course-related instruction. Actively promotes and delivers seminars, workshops, and class lectures for science departments and institutes, and for the Internet Curriculum. Assumes significant responsibilities for building the print and electronic collections in assigned subject areas. Required: ALA-accredited MLS degree (by 8/31/02); strong academic background in the sciences; knowledge of physical and life science literature and reference materials; understanding of trends, issues and methods of scientific research; familiarity with electronic resources, including those commercial databases and public archives on the Internet; ability to work both independently and creatively in a team environment; teaching ability; and effective oral and written communication skills. Desired: Science reference experience; degree in physical or life sciences; demonstrated professional development activity; marketing or PR experience. Salary: \$31,500 min., depending on qualifications and prior experience. Deadline: June 5, 2002. Send cover letter, résumé, and names, addresses, phone numbers, and e-mail addresses of four references to: Ms. Laine Stambaugh, Coordinator, Personnel Development, 1299 University of Oregon Libraries, Eugene, OR

97403-1299. (541) 346-1895; (541) 346-3485 (FAX); lastamba@oregon.uoregon.edu. Electronic applications are accepted initially, but must be followed by a hard copy with signature. For complete description, see: http://libweb.uoregon.edu/admnpers/sciencelib2002.html. AA/EOE/ADA.

(Note: If you have already applied for the Science & Technology Services Librarian position, and would like to be considered for this position, you do not need to re-apply. Just Laine Stambaugh know that you are interested.)

Science Reference Librarian, University of California, Riverside,

The University of California, Riverside is seeking an innovative, energetic and service-oriented Science Librarian to join the Information Services Department of the Science Public Services Division and further the development and use of the LibraryÆs electronic resources. Participates individually and as part of a team to provide traditional and electronic reference service and research consultation to a diverse user community in the physical and life sciences. engineering, and agriculture. Graduate library degree. Knowledge of a wide range of print and electronic information resources, plus experience in using the Web as an information source. Instruction or training experience. Significant coursework or experience with using technology in providing library services. The successful candidate will be appointed to the Librarian Series at a salary level appropriate to the candidate's qualifications and experience. Appt. range: \$37,920 - \$49,224. 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 and an excellent retirement program. To ensure consideration, applicants should send a letter of application, a complete resume, and the names and addresses of three references by June 30, 2002 to: John W. Tanno, Deputy University Librarian, University of California, P.O. Box 5900, Riverside, CA 92517. The University of California is an affirmative action/equal opportunity employer. Link to the complete position description: http://library.ucr.edu/news/jobs.shtml

OVERHEARD ON THE INTERNET

(note: these e-mails are reprinted here with the authors' permissions)

25 April 2002

To: Marcia McNutt, AGU President From: Ralph Keeling, Jeff Severinghaus, Peter Brueggeman CC: AGU Executive Committee, AGU Publications Committee

Dear Marcia,

It has recently come to our attention that, in its move towards online publishing, AGU has done away with sequential page numbering of journal articles as of January 2002. Instead, AGU is requiring articles to be cited based on a 20-digit character string (e.g. 10.1029/2001JA001490), known as a digital object identifier (DOI), and disallowing current scientific practice wherein articles are cited by volume, issue, and page numbers.

The cited benefits of AGU's new system include the ability to improve online access, the flexibility to submit videos or other multi-media materials as part of an article, and the ability to provide electronic links to other articles or pieces. The impression given by the AGU web page (http://www.agu.org/pubs/e_publishing/) is that the elimination of sequential page numbering of journal articles was necessary to provide these benefits.

In a search of current publishing practice, however, we have come up with a short, admittedly incomplete, list of commercial publishers and professional societies who continue to use sequential page numbering of journal articles in their transition to online publishing: American Meteorological Society, American Chemical Society, American Fisheries Society, Nature, Science, American Institute of Physics, Elsevier, Company of Biologists, Royal Society of Chemistry, University of Chicago Press, Geological Society of America, Kluwer, Springer Verlag, Cambridge University Press. Many of these consider their ejournal to be the archival record, and provide active links via an HTML version. We were unable to find a single example, besides AGU, of a scientific publisher abandoning sequential page numbering of journal articles in the transition to online publishing. We also checked with the Director of the Science & Engineering Library at UCSD, who was also unable to cite any publisher following AGU practice. Although examples might still be found, it is clear that AGU's practice is out of step with general trends in online publishing.

As an emerging industry standard, the DOI clearly fulfills an essential need in electronic publishing, by providing an alternative to the awkward practice of referring to (unstable) web addresses. Nevertheless, the way the DOI is being implemented by AGU, as the unique identifier of scientific articles for citation purposes, is apparently highly eccentric.

Unfortunately, AGU's decision to eliminate sequential page numbering of journal articles and to force citations to

be based solely on the DOI comes at a high cost:

- (1) The use of the DOI for citations creates problems in compatibility. It is annoying and troublesome to have two different filing or organizational systems in use concurrently in science: AGU and everybody else. It appears that all science ejournal publishers except AGU refer to their publishable units, the article, by volume, issue, and pagination Although the community that commonly cites AGU journals may be able to adapt, problems will remain for the wider community that doesn't understand the AGU system and doesn't want to be bothered. Some may assume that AGU publications are "grey" literature or still "in press", since their citations look non-standard among scientific publications. It's naive to assume that AGU's unique system will ever be transparent to the scientific community at large. Many institutions' libraries will continue to subscribe to AGU journals in print for reasons of economy; the DOI is awkward for anyone accessing print collections in libraries.
- (2) The DOI carries no information about article length, which is valuable for many obvious reasons.
- (3) Citation based on the DOI takes up extra print space. Less than 20 characters are typically required for indicating volume number and page range (e.g. "24, 1654-1675" entails 13 characters). The extra length of the DOI may cause the citation to spill over onto a new line, thus taking up even more space. The difference is probably not trivial for high-profile journals like *Science* and *Nature*, where space is at a premium.
- (4) The DOI strings are likely prone to transcription error because, with so many characters in an unbroken string, they are hard to scan by eye. We don't live in a perfect copy-and-paste world, and a significant percentage of people will be typing in these DOIs.

In summary, the decision to eliminate sequential page numbering of journal articles in favor of the DOI has created many problems for AGU readers and authors. One might be tempted to argue that these are problems of transition which will be reduced once people adapt to the new system. In fact, every one of the problems listed above will present a continuing difficulty, which will only be lessened if the entire scientific journal publishing enterprise changes the way it cites articles to AGU's unique approach.

We therefore request that the decision at AGU to eliminate sequential page numbering and to require use of the DOI for citation purposes be revisited. The collective practices of scientific publishers show that sequential page numbering for journal/articles is possible in an online world. If, for some reason, AGU finds sequential page numbering to be difficult, a user-friendly scheme co-existing with the DOI could be developed in which various methods/terms are used to identify and number journal articles within volumes/issues without the usage of sequential pagination, like

fascicules, parts, etc. In all likelihood, an acceptable scheme exists which entails only minor changes to the present AGU production process.

Sincerely,

Ralph Keeling, Assoc. Prof., Scripps Institution of Oceanography

Jeff Severinghaus, Assoc. Prof., Scripps Institution of Oceanography

Peter Brueggeman, Director, Scripps Institution of Oceanography Library

8 May 2002

Ralph Keeling Jeff Severinghaus Peter Brueggeman Scripps Institute Of Oceanography

Dear Drs. Keeling, Severinghaus, and Brueggeman

Thank you for copying me on your recent note to Marcia McNutt inquiring about the decision of AGU to forego sequential page numbers in our journals. Although the Publications Committee did not meet subsequent to receipt of your e-mail, I have been in contact with the members and with staff at headquarters regarding the points you make and the questions you raise. After carefully thinking about the issues once more, we remain convinced that the course charted by AGU is correct.

As noted in the excellent article by Sam Bowring that you cite (i.e., http://www.agu.org/pubs/e_publishing/), AGU has declared the electronic version to be the journal of record. The html is the online representation of the journal of record. AGU did this so that nonprintable material would be an integral part of the record of science and not simply supplementary to it though other publishers are including nonprintable material on their web sites, it is not a part of the formal record so long as their print version is the journal of record.

The view expressed in your note is that AGU's use of the Digital Object Identifier (DOI) is "highly eccentric" and "out of step with general trends in on-line publishing". Our alternative view is that AGU has taken a bold step ahead of almost everyone else. The society publications to which you refer in your note have not declared their electronic journals to be the journals of record. Archiving the electronic files is a far different thing than declaring a change in the journal of record. We have been told by one society on your list that when they do take the step of declaring the electronic version to be the record, they expect to move to the DOI as the means of citation. Although not on your list, the American Physical Society has declared their electronic version to be the journal of record. APS does not have sequential page numbers. They use a 6-digit article number and instruct authors to cite that number in lieu of page numbers.

We believe that in the near future more journals will

move to use of the DOI and that it will become clear that AGU's practice is not "out of step with general trends in online publishing", but rather defines the trend for the industry. For example, already Nature has adopted the DOI as part of their citation. The following is a quote from their web site: "Given the utility of the DOI in locating an online publication in the future, we encourage you to use DOIs in your reference citations (see "Can I use the DOI in a reference citation?").."

Furthermore, we believe that the method of citation chosen by AGU is rather clear and that users of the print version will not have difficulty in locating an article. The AGU recommended citation style includes the volume and the issue number. The issue number is an aid for those using the print journal. Once the user gets to the printed journal, he/she finds an author index and a DOI index for that issue. These indexes indicate the article order within that printed issue. We assign an issue number at the time of publication. For special sections, that number may be several months in the future. But the issue number is the best key to finding an article on the shelf of printed journals. The issue number appears on the spine of the journal.

Of course, as you state, we could search for interim "solutions" that would allow sequential page numbers to coexist with the DOI. We have considered this issue and find that the costs of doing this far outweigh any benefits. Here are two ideas and our reasons for discarding them.

1. We could have sequential page numbers in the printed journal if we did not provide a pdf online until the journal is printed. (Otherwise, we have to pay the cost for remaking all of the pages just to get the page numbers into them for the printing process, an additional cost that is clearly not justified).. This strikes us as a terrible idea.

2. We could go the route of Nature and cite the paper one way before printing and another way after. The Publications Committee sees this as an option that potentially causes confusion rather than enlightenment. We chose the DOI as a consistent and persistent way of citing an article from the moment of publication. The DOI is an international standard designed exactly for the purpose of citing electronic material in a way that persists regardless of changes in technology or changes in the server on which a particular file resides.

In summary, it is our opinion that we cannot simply stagger along attempting to keep up with changes by applying short-term, inadequate fixes. We believe that the move to the DOI as a citation standard may put AGU ahead of the curve, but the rest of the world will soon catch up and we all will become used to the new way of citing articles. We hope that you will stay the course with AGU, even if you remain skeptical. At the pace of advancements in electronic publishing, the results of the "experiment" will be known to all of us in very short order.

Sincerely,

George M. Hornberger, Chair, Pub. Comm., AGU

May 24, 2002

Subject: Re: Sequential pagination in AGU Journals To: George Hornberger, Chair AGU Publications Committee

From: Ralph Keeling, Jeff Severinghaus, Peter Brueggeman CC: AGU Executive Committee, AGU Publications Committee

Dear George Hornberger,

Thank you for responding to our letter regarding AGU's use of the DOI. Your letter helps to clarify certain issues, though you did not address our concern about loss of information on article length. We remain unconvinced that AGU's decision to eliminate a simple citation scheme and rely solely on the DOI to cite AGU ejournal articles was well founded.

The American Physical Society is cited in your response to our letter. APS citations on the websites of their various online journals of record have article numbers and total page length for each article (excepting *Reviews of Modern Physics*, which uses sequential pagination). Two other online journals of record, Journal of Insect Science and Pediatrics, use article numbering; see examples below. One online journal of record, LMS Journal of Computation and Mathematics, continues to use sequential pagination. You also cited Nature as an example. When you search across articles in Nature's "search" system, you retrieve citations to Nature articles that incorporate the DOI in the citation as an ADDITIONAL redundant citation element, and NOT REPLACING shorter, more user-friendly citation elements. See examples below.

At the close of our letter to AGU, we suggested article numbering if it was impossible to continue sequential pagination across articles, but we did not propose it as an interim solution as you erroneously stated. We suggested it as a user-friendly and simpler citation scheme to co-exist with the DOI, as APS and other publishers are doing.

For centuries, scientists have been citing publications incorrectly, using various arrangements of simple bibliographic elements such as volume number, issue number, page, etc. It seems so simple, yet how many times have scientists dealt with erroneous citations?. Human nature will not change now that journals are electronic, and scientists

will continue to make mistakes. Publishing ejournal articles that are only citable by a long string of characters like the DOI will increase the opportunity for error and make published articles more difficult to locate, whether in print or electronic. Our concern would be largely satisfied if AGU more closely followed the lead of APS and the other online publishers in not requiring the use of the DOI for citations and in providing information on page counts.

If the various responses to our earlier letter (which was circulated on various list servers) are any guide, a course correction may be warranted. The next step should involve input from a wider community than just AGU staff and the publications committee.

Sincerely,

Ralph Keeling, Assoc. Prof., Scripps Institution of Oceanography

Jeff Severinghaus, Assoc. Prof., Scripps Institution of Oceanography

Peter Brueggeman, Director, Scripps Institution of Oceanography Library

Examples

Physical Review A (Atomic, Molecular, and Optical Physics)--April 2002 Volume 65, Issue 4, Articles (04xxxx) Entanglement induced by a single-mode heat environment M. S. Kim, Jinhyoung Lee, D. Ahn, and P. L. Knight Published 2 April 2002 (4 pages) 040101(R)

Dunkov, B.C., Georgieva, T., Yoshiga, T., Hall, M., Law, J.H. 2002. Aedes aegypti ferritin heavy chain homologue: feeding of iron or blood influences message levels, lengths and subunit abundance. 10 pp. Journal of Insect Science, 2.7.

Ron Keren and Eugenia Chan A Meta-analysis of Randomized, Controlled Trials Comparing Short- and Long-Course Antibiotic Therapy for Urinary Tract Infections in Children Pediatrics 2002; 109: e70.

Evolutionary biology: Searching for speciation genes Roger Butlin, Michael G. Ritchie Nature 412, 31 - 33 (05 Jul 2001) DOI: 10.1038/35083669

GIS PUBLICATIONS LIST

Proceedings of the Annual GIS Meetings (ISSN 0072- 1409) \$45.00 each; standing orders are \$45.00/year. (Proceedings volumes 1through 25 are out of print and available from: Out-of-print Books on Demand, University Micro-films, Inc., 300 North Zeeb Road, Ann Arbor, MI 48106.)

--v. 31, 2000 Electronic Information Summit: New Developments and their Impacts, ed. by Sharon N. Tahirkheli. (ISBN 0-934485-33-X)
--v. 30, 2000, Communication Divides: Perspectives on Support-ing Information Bridges in the Geosciences, ed. by Lois Heiser,
(ISBN 0-934485-32-1)

-v. 29, 1999 Accreting the Continent's Collections, ed. by C. R. M. Derksen and C. J. Manson, (ISBN 0-934485-31-3)

--v. 28, 1998 The Costs and Values of Geoscience Information, ed. by C. J. Manson. (ISBN 0-934485-29-1)

--v.27, 1997 Expanding Boundaries: Geoscience Information for Earth System Science, ed. by B. J. DeFelice. (ISBN 0-934485-23-2)

--v. 26, 1996 Crossing the Bridge to the Future: Managing Geo-science Information in the Next Decade, ed. by N. L. Blair. (ISBN 0-934485-26-7)

Proceedings of the International Geoscience Information Conferences

6th, 1998 Science Editing and Information Management,

Proceedings of the Second International AESE/CBE/ EASE Joint Meeting, Sixth International Conference on Geoscience Information, and Thirty-second Annual Meeting, Association of Earth Science Editors, ed. by Connie J. Manson. (ISBN 0-934485-30-5) \$ 25.00 5th, 1994 Geoinfo V, Proceedings of the 5th International Conference on Geoscience Information, ed. by Jiri Hruska. (ISBN 0-934485-27-5) \$ 45.00 (2 vols.)

Directory of Geoscience Libraries, North America. 5th Edition, 1997.(ISBN 0-934485-25-9) Paper. \$ 35.00

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