



NEWSLETTER

Number 169, December 1997

ISSN 0046-58301

CONTENTS

Special Features:

GIS Annual Meeting Business Report.....	4
GeoRef User's Group Report.....	6
CUAC Annual Meeting Report.....	6
Report on GIS Digital Database Forum.....	12
AGI Member Society Annual Report	13
GIS Archives Committee Annual Report.....	14
FGDC Utilities Data Content Standard.....	14
Geoscience Journal Prices.....	16

Departments:

President's column.....	1
Vice President's Column.....	3
Upcoming Conferences:	
AESE/CBE/EASE/GeoInfo VI.....	14
Announcements.....	15
Literature Reviews.....	15
Member News: New Members.....	15
Corrections to Membership Directory.....	16
Internet Sources.....	16

PRESIDENT'S COLUMN

For years now, I've been hosting the Family Thanksgiving Dinner-- a formal (or, as formal as my family gets) sit down dinner for 25 or so. I pull out all the stops: damask linens, Mom's silver, the china that's only used that day, and all the crystal I own. (It's my "annual family penance"-- I do Thanksgiving, and I'm off the hook for the rest of the year.)

Organizing the GIS Annual Meeting is a lot like doing Thanksgiving. For both, you plan and fret and hope you didn't forget something important (like turning on the oven). And for both, we have a template of past successes to follow, and a tremendous amount of help from the participants. At Thanksgiving, everyone brings their special dishes (my sister-in-law brings her famous pies). At the Annual Meeting, the past Vice Presidents gave us great examples to follow, and the committee chairs organize their sessions. The success of these annual gatherings is the result of the work of all these people.

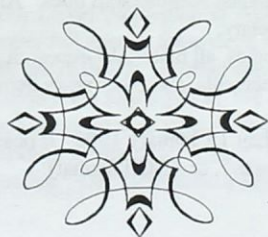
At Sunday's Digital Database Forum (organized by Vivienne Roumani-Denn), we saw demonstrations of the latest developments in electronic journals. Amazing things are happening--Color and sound, of course, but now even animation! Some publishers are providing not just the full text, but also, occasionally, links from the references to the full texts of those cited articles. Some publishers intend to have all their journals available on-line, within the next year. There is a troubling development on that, though, since some publishers are prohibiting the use of the electronic version of their journals for interlibrary loan. (I wonder how authors would react to that, and how that might influence citation rates and "impact" factors. That will certainly be something to watch.)

Monday morning had the Collection Development Issues meeting (organized by Steve Hiller). This has long been one of our most important and interesting sessions, and this year was no exception. Again, we got updates on the trends in journal and monograph publishing. (Look for the multi-year journal price list elsewhere in this issue.)

The Monday evening Reception was held at the Marriott. Ironically and delightfully-- a surprise to both me and to the GSA organizers-- our reception was held in a small room decked out as a home library. The books (bought, perhaps by the pound) were glued, decoratively, to the shelves. But it set just the right tone.

The first order of business Tuesday was the Symposium. It was well-attended, especially by geologists and other non-GIS members. We had a good selection of speakers, representing the life cycle of the geoscience report. Bill LaPrade set the stage by discussing how the consulting geologist uses the existing literature. Beth Duff talked about current publishing at the USGS. Research and publishing at state geological surveys were discussed from the viewpoint of progressive surveys like Kansas (presented by Rex Buchanan) and of catching-up surveys like

(continued on page 3)



**GEOSCIENCE INFORMATION SOCIETY
1998 OFFICERS**

President

Connie Manson
Washington Div. Geology and Earth Resources
P.O. Box 47007
Olympia, WA 98504-7007
360/902-1472; fax: 360/902-1785
e-mail: connie.manson@wadnr.gov or
cjmanson@u.washington.edu

Vice President/President Elect

Charlotte Derksen
Branner Earth Science Library & Map Collection
Mitchell Building
Stanford University
Stanford, CA 84305
415/725-1102; fax: 415/725-2534
e-mail: cderksen@marine.stanford.edu

Immediate Past President

Barbara J. DeFelice
Kresge Physical Science Library
Dartmouth College
Hanover, NH 03755-3571
603/646-3565; fax: 603/646-3681
e-mail: barbara.defelice@dartmouth.edu

Secretary

Lisa G. Dunn
Arthur Lakes Library
Colorado School of Mines
P.O. Box 4029
Golden, CO 80401-0029
303/273-3687; fax: 303/273-3199
e-mail: ldunn@mines.edu

Treasurer

Susan Goodman
Library of Science & Medicine
Rutgers University
Piscataway, NJ 08855
908/445-3858; fax: 908/445-3208
e-mail: sgoodman@rci.rutgers.edu

GIS Homepage

<http://www.lib.berkeley.edu/GIS>
Chair: Vivienne Roumani-Denn
e-mail: Vroumani@library.berkeley.edu

Listserv Geonet-L@listserv.indiana.edu

Editor: Lois Heiser
Geology Library
Indiana University
Bloomington, IN 47405
812/855-7170; fax: 812/855-6614
e-mail: heiser@indiana.edu

Publication Officers

Newsletter Editor

Mary Frances Lembo
Earl K. Long Library
University of New Orleans
New Orleans, LA 70148
504/280-7280; fax: 504/280-3173
e-mail: mflfi@uno.edu

Literature Review Editor

Miriam L. Sheaves
Geology Library
CB# 3315 Mitchell Hall
University of North Carolina
Chapel Hill, NC 27599-3315
(919) 962-0681
e-mail: miriam_sheaves@unc.edu

Publications Manager

Lois Heiser
Geology Library
Indiana University
Bloomington, IN 47405
812/855-7170; fax: 812/855-6614
e-mail: heiser@indiana.edu

Publicity Officer

Carol J. La Russa
Physical Sciences Library
University of California, Davis
Davis, CA 95616
916/752-0519; fax: 916/752-4719
e-mail: cjarussa@ucdavis.edu

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

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

Material for the February 1998 issue of the GIS Newsletter should be received no later than 15 January 1999. If possible, please send materials by e-mail or on IBM-compatible disc (WordPerfect 5.1, WordPerfect for Windows 6.1, or ASCII format).

(President's Column, con't)

Washington (presented by Tim Walsh). The world of commercial journal publishing was presented by Bas van der Hoek of Elsevier and that of society journal publishing by Judy Holoviak of AGU-- who reminded us of the responsibilities journal publishers have, as the "journal of record", to ensure that the materials are available in perpetuity.

Gary Fitzpatrick of the Library of Congress discussed how they are preserving and accessing the old graphic materials with the newest technologies, while Charlotte Derksen and Barbara Haner talked about the access and costs of e-journals. The session was rounded out by Don Browne who is concerned with preserving whole collections of manuscripts and samples-- like those of his co-author J. David Love-- for future study. (On a personal note, my very special thanks go to the co-convenor, Mary Krick. I'd asked Louise Zipp to be the con-convenor, properly far in advance, but Louise discovered only a week before the meeting that she would not be able to attend. At that last minute, Mary graciously agreed to help. The session went very smoothly, with Mary working to fix the lighting, keep all the speakers on time, and do all the rest that kept the session going. Kudos!)

The Technical Session (held Wednesday morning) was, and always is, a mixed bag. We had speakers about national geological surveys and databases, technical editing and technology transfer, and securing websites.

Sharon Tahirkhelli gave us the updates on our favorite database at Wednesday's GeoRef Users Group meeting (organized by Suzanne Larsen); that full report is elsewhere in this issue.

Has anybody noticed that, what with downsizing, tight budgets, and galloping new technologies, that we're all stretched thin? All doing more, faster, and struggling to keep up? These and other current concerns were discussed at the Professional Issues Forum, led by facilitator Jim O'Donnell. That open session, without a structured agenda, heard discussions of those and other issues.

A lot of attention was paid at this year's meeting to the situation of the U.S. Geological Survey libraries. (We all got caught up in that flurry last spring, over the proposal to so drastically reduce their journal budget-- a move that would have harshly reduced their--and our--ability to meet our information needs.) There were discussions of those issues at our Business Meeting Tuesday afternoon-- from Bill Holser, Ed Lizsewsky and others. At the first Friends of the U.S. Geological Survey Library meeting that same evening, those issues were discussed by Patrick Leahy, Bill Holser, and many GIS members.

At the affiliated members Presidents' Breakfast (Thursday morning), I presented those issues and proposed that solutions come, not from individuals, but from the affected professional societies; since we're all in it together

Those ideas were very well-received, and after a lot of discussion among those society presidents, AGI was proposed as the focus and leader for those efforts. (I've had a few e-mails, since then, with both David Applegate at AGI and with Bill Holser. AGI has a pretty full agenda these days, so the fate of the USGS libraries is only one of their many other concerns, including the choice of the successor to Gorton Eaton. We'll be continuing to press that issue, though, in the next year. "Watch This Space", for more developments on all this.)

It was a great meeting. Oh, there were a few glitches (there

always are), but none as bad as the year the power went off when the Thanksgiving turkey was half-cooked. We left, stuffed with ideas and cheered by the camaraderie of old and new friends. On to '98!

Connie J. Manson,
GIS President

VICE PRESIDENT'S COLUMN

Even though it seems as if we've just gotten home from Salt Lake City, it is already time to start thinking about and making plans to go to Toronto for next year's meeting. The conference theme is *ASSEMBLY OF A CONTINENT*. To quote from the GSA Meeting page: "The tract of land which the world calls North America is under the jurisdiction of three governments - Canada, Mexico and the United States. National boundaries are set by political actions and generally have little relationship to natural features. Geological boundaries, by contrast, know nothing of politics." For more information about the broad program see: <http://www.geosociety.org/meetings/98/98theme.htm>.

Accreting the Continent's Collections will be the theme of our upcoming symposium. Budget constraints, revision in agency/survey mandates, electronic publishing, journal cancellation projects, and staffing shortages are combining to require changes in what materials we collect, in how much, and what kinds of access to information we can provide, and to whom we provide it. We are looking forward to presentations covering new service models, effects of change on materials collected, how consortial or cooperative arrangements have altered what we collect and whom we serve, and how we have worked or can/must work together to provide needed earth sciences information. In line with main conference themes, Canadian and Mexican issues will be highlighted. A few speakers are already lined up; however, if you are already doing research in an appropriate area, are excited by some aspect of this theme, or know an outstanding speaker you'd like us all to hear, please contact me (cderksen@marine.stanford.edu).

For those of you who couldn't attend the GIS business meeting and who haven't seen the pertinent announcements from GSA, there will be a phased in change in overall conference program structure. Both the technical and the symposium session structures will re-organized in accordance with the new guidelines. The Toronto meeting will be the first conference in a series of three, during which these modifications will be introduced. However, it was confirmed at the conference planning session that the familiar symposium and technical session structures will continue as we have known them for one more year. Thus if you've been thinking you'd like to do a paper sometime to fit one of the familiar sessions, this next conference will be the time to give it. Posters are and will continue to be an excellent mechanism for presenting a study you've done both to your colleagues and to the geologists attending the conference. Preservation issues, innovative ways of introducing undergraduates to earth sciences information, availability of

information sources (floods, earthquake, or even hiking information) all lend themselves well to delivery as a poster. Please contact me if you have any questions, or want to try out ideas for a presentation. The abstract deadline isn't until July, 1998.

Charlotte Derksen,
GIS Vice President

Annual Business Meeting, GIS

GSA/GIS Annual Meeting
Salt Lake City UT, 10/21/97

1. Welcome to meeting, format of meeting.
2. Approval of minutes of 1996 meeting.
The minutes were seconded by O'Donnell and approved.
3. Introduction of:
New officers: Charlotte Derksen, VP, and Susan Goodman, Treasurer
New members (or first meeting):
Christopher Thiry, Colorado School of Mines
Visitors
Kitty Reed, Washington Geological Society
4. Announcements.
Announcements were made on the field trip logistics; GeoRef User's Group meeting; Community of Science presentation; Professional Issues meeting.
5. Officer reports.

Secretary: Dunn distributed updated membership statistics. She reminded the members to advise her of any problems receiving Society mailings.

Treasurer: Scott distributed the updated Treasurer's report, made some corrections, and requested that reimbursements be submitted at the meeting or as soon as possible. She is preparing the draft budget for next year and needs committee budgets this week. Scott said that investment decisions need to be made on the Society's funds and are being planned.

Vice President: Manson announced that the meeting has been going very well. She distributed committee openings and said that there are still some openings.

President: DeFelice had nothing more to report.

6. Updates to the annual and special reports of committees, appointees, and representatives. [Some groups had nothing to report.]

1998 Annual Program Committee: DeFelice said that GSA is proposing major changes. For example, the symposia are being

replaced with "topical sessions," with a maximum of four invited papers and the remainder as submitted papers. Proposed meeting dates are Sunday-Wednesday rather than Monday-Thursday. GSA would like to limit the sites to three cities-- Denver and two others, possibly Boston and Seattle, because of cost issues. Derksen announced that with the next site in Toronto, the Society will be calling on Canadians for planning help. She is very interested in a panel discussion format.

Exhibits: DeFelice announced that the Executive Board is going to get a new exhibit display that is easier to ship and transport. April Love is charged with this.

International Initiatives: Kidd said that the announcement for the joint international meeting with GeoInfo VI is being distributed. This is the joint meeting of the Second International AESE/CBE/EASE Joint Meeting, the Sixth International Conference on Geoscience Information (GeoInfo VI) and the Thirty-second Annual Meeting of the Association of Earth Science Editors. The second circular should be out in November and will be in the GIS newsletter. During the meeting, information demonstrations will be available using technology provided by AGU. Kidd asked for speakers for the conference, papers, posters and possibly panel discussions. There are also field trips planned: (full day) in the area and (half-day) to urban sites. (The USGS, Library of Congress, etc. are possibilities.) GIS will publish the proceedings volume, since the other organizations don't usually publish a proceedings. Haner announced that a banquet for the Association of Earth Science Editors is a possibility. Projected registration costs for the joint conference should not exceed \$230. Haner reviewed the other meetings scheduled at or near that time.

Cook made the proposal to bring earth science librarians from developing countries to GeoInfo VI, arrange for host homes to give them exposure to our resources, then have them attend GSA/GIS. The program would possibly be limited to three people. They are looking for host volunteers, and are involved in fund-raising. Cook said that they have a \$5,000 donation at present, which will support one person's travel. They are putting out a cover letter from the GIS Executive Board to the mining and petroleum companies, preferably those with workings in developing countries. The proposal is being marketed on the basis that it will benefit these companies in the long run with better access to information overseas.

Membership: O'Donnell thanks the committee for their help in putting out the new brochure. He distributed samples and will get changes from the Board. People should let him know if they need copies. A membership drive is being planned.

Nominating: Blair thanked people for the great slate.

Preservation: Wishard reported that the committee will submit their budget to the treasurer. Goals for this year include: Subcommittees will be preparing summary documents of their work that others can use; a web-based form will be created so people can submit their preservation activities and goals; a survey will be distributed through the newsletter and possibly other sources (GeoTimes, etc.); field trip guidebooks from the turn of

the century are a target and may be ready for GSA next year. The Committee is moving into the final year of the action plan, and proposes that the preservation issues forum become a permanent part of the program for the future.

Website: Roumani-Denn asked that any changes to our publications (print) that are reflected on the website be forwarded to her since the website is one of our official publications and needs to be accurate. She asked for suggestions on the format of the website and for data display. Existing links will be reorganized.

Union List: Derksen distributed the committee's proposal to be reviewed by the Board, to be considered under New Business. There was general consensus that the Union List be continued, if not using the same name. Derksen reported that AGI does have the GeoRef Previews database on the web, and that they planned to adapt the same technology for a union list.

Appointees--

Publications: Heiser commented on the proposed income from *Directory of Geoscience Libraries*, and announced that the *GeoInfo V* proceedings need only 5 more sales to break even.

Newsletter: Lembo made a request for articles. She indicated that some members are receiving duplicate newsletters as she manages the logistics of the bulk mailings.

Reviews: Sheaves announced that she had books to review, and requested that any announcements be sent to her.

Representatives--

AGI: Larson met with the GeoRef Advisory Committee, which is discussing planning and direction. AGI isn't making any money off of GeoRef on FirstSearch, for example, and she wants to discuss this at the Users group meeting.

AGI Government Affairs Program: Dvorzak reported an extremely active year. For example- National Earthquake hazards Program was re-authorized, and the National Repository Program is still viable. Dvorzak distributed a handout on the AAAS statement on intellectual property protection for databases. GAP is now 5 years old and is working on a strategic plan that will be posted on their website.

AGI Member Society Council: Haner reviewed their activities and announced that the Council was now up to 31 member societies. Haner's report will be in the newsletter. The AGI Foundation will be opening up the way for small societies to put in requests for funding. They presented some issues on ethics for geoscientists, which should be incorporated into curriculum. Two other key issues were presented. 1.) A proposal for a consolidated directory of AGI geoscience professionals as part of AGI's 50th anniversary. The contract publisher would send out a questionnaire to our membership list, to be filled out as individuals desire. The database would be AGI's property, and confidential. The purchase price would be about \$56.99-59.99, and the projected publication date is November 1998, as a one

time project. 2.) A catalog of AGI member societies. Societies would pay to submit entries, which could include membership brochure, publications information, activities, etc. and it would be meant as a promotional publication.

AGI Environmental Advisory Committee: Lerud indicated that concerning the Geoscience data repository, paper seems to be low on the priority list, below cores, paleontology samples, etc. The committee is producing a number of publications. They should be made aware of meeting announcements from member societies with their own environmental groups. Her report will be in the newsletter.

CUAC: Spohn announced that their new member is Clara McLeod. Their next meeting will be in the newsletter.

WAML: Spohn made the spring meeting announcement. The next WAML meeting is to be held in March at Stanford University.

8. GeoInfo VI and the Science Editing and Information Management joint conference. This issue was discussed under the International Initiatives committee report.

9. Friends of the USGS Library.

Bill Holser, Professor Emeritus of the University of Oregon and Ed Liszewski, USGS-Reston, spoke. Liszewski indicated that he cannot lobby on behalf of the USGS library but he could provide facts and discuss the issue of a national library for the geosciences. He discussed the Survey's library budget, which is funded by usage-based assessment of the Survey's operating units. In responding to a question from Holser, Liszewski indicated that the Geologic Division pays for non-Survey (public) users. Some of the divisions have objected to their assessments, leading to materials budget shortages which the Geologic Division has helped pick up. (In the ongoing reorganization this won't happen.) The FY 97 budget cut serials funding by 50%, and when this news hit the Internet and provoked a negative public response, the Survey was surprised. Liszewski thanked the geoscience community for this action, which changed the cuts from 50% to \$50,000. The materials budget is now close to \$1 million total. Liszewski hopes that we will take a continuing interest in this issue.

The proposed reorganization of the Geologic Division and its "Library Services Group" may consolidate other libraries (bioscience, water resources, cartographic) within the USGS. A "National Earth Science Library" is a possibility but would require legislation. The other US national libraries are the National Library of Medicine and the National Agricultural Library. Liszewski was unable to answer Dvorzak's question on the percentage of unique materials held by the Library. Manson indicated that she expected that almost all holdings are repeated elsewhere, but not all in one place, even within the USGS library system. The USGS library system has more depth and breadth, better policies and access. Haner asked whether under the reorganization the budget would have to cover the other libraries' subjects of biosciences and water resources. Liszewski indicated that at present it was only for the four USGS libraries and the

former USBM libraries.

Holser expressed concern that proposed suggestions are short-term. He would like to introduce some method of stability for authorizing budget and resources. A national library isn't subject to idiosyncrasies of an annual budget. Hardy asked about disadvantages of a national library. Liszewski responded that the library's funding would be a line item, which could hypothetically be removed completely. Historically, however, there have been considerable budgets for the existing national libraries. Noga said that the USGS's exchange program is superior, and he wouldn't expect this stuff to be elsewhere in this country either. Derksen added that conference proceedings are also more readily available from the USGS. Liszewski said that the discussion hadn't even reached electronic formats, and that funding would be needed for these formats as well. Hallmark asked whether there was anyone named to introduce legislation or follow up on this. Holser announced the meeting time and place for the "Friends of the USGS Library."

10. GIS logo.

Derksen moved that we look into designing a new logo, and Lembo seconded. O'Donnell indicated that the existing logo is old fashioned (over 20 years old) and doesn't fit comfortably on what we publish. Newman asked whether this was the time for a name change as well. It was decided not to address that issue at this time. Noga volunteered to serve on a committee for this purpose. The motion was passed.

11. New business.

Union List: O'Donnell moved to accept the Union List Committee's proposal and Blair seconded. In response to a question, Derksen indicated that was costly of time and effort to compile holdings, there were accuracy issues, and the growth of online library catalogs made this less important. Because the next List will not have holdings information, there was discussion on whether to continue to call it a "union list." O'Donnell clarified the addition of provisional entries. Heiser mentioned the possibility of printing on demand. Because the List is using the Previews platform, AGI will probably be handling printing, costs and billing, etc. Larson said that we should take advantage of the electronic environment and encourage developers to do so. Derksen suggested for the future a map to click on guidebook areas or clickable stratigraphic columns. Spohn said that the new committee members would be setting logistics like time lines and target dates. The motion to accept the Union Catalog committee's recommendations passed.

Announcement: Lerud announced the International Cultural Heritage Collected in Libraries of Mining, Metallurgy and Geosciences meeting in Golden in 2000.

AGI membership directory: Heiser moved that we participate, and Haner seconded. Dvorzak indicated that the other society representatives expressed little enthusiasm, having some of the same reservations on how the information would be used. Dunn clarified that AGI isn't asking for our membership database but is going to solicit each member separately for his or her participation. There was further discussion about the directory's

usage and confidentiality of member information. The motion carried to provide AGI with our mailing labels (at no charge) for contacting the members.

AGI combined publications catalog: O'Donnell moved that we spend the money to buy a page for our Society's information (publications and membership information, for example). Hunter seconded and the motion carried.

12. Adjournment.

DeFelice performed the handing over of the Gravel to Manson. O'Donnell moved to adjourn and Clement seconded. The meeting was adjourned.

Respectfully Submitted,
Lisa Dunn, GIS Secretary
11/7/97

GeoRef User's Group

Suzanne T. Larsen, Chair

The GeoRef User's Group met on October 22, 1997 at the annual Geoscience Information Society meeting in Salt Lake City, Utah. About 30 people attended the meeting. Sharon Tahirkheli, from AGI, gave a presentation on GeoRef issues and progress since our meeting the previous year. One of her most important announcements was that the price of GeoRef is increasing 5% across the board to all users. Following Sharon's presentation, Carol Fedora from the Community of Science, gave a demonstration of GeoRef using COS software. The new GeoRef User's Group Chair will be Nancy Blair. Full minutes of the meeting will be published in the next GIS newsletter.

Cartographic Users Advisory Council Minutes

1997 Annual Meetings May 8 - 9, 1997

U.S. Bureau of the Census
Geography Division
Upper Marlboro, MD

Thursday May 8, 1997

U.S. Bureau of the Census
Joel Morrison
Chief of the Geography Division

Joel welcomed the Council to the Geography Division. He began his remarks by noting that the Division is very pleased with its new location in a much more attractive facility. He went on to describe how the Division provides geographic support for the Bureau's activities and currently employs 200 to 225 persons. The Division has also become a "boundary dump" or warehouse for geographic files. Agencies with georeferenced data often supply the Division with those files, for instance the TIGER files contain school districts.

The 2000 census is, of course, the main focus for the Bureau and the Geography Division. Joel emphasized what an enormous undertaking it is to count every person in the U.S. The decennial census is such a large and complex undertaking that it would be nearly impossible to contract out the functions of the Bureau. He also mentioned that the Bureau has had difficulties keeping temporary staff and hiring capable persons at previous wage rates. They may be paying higher wages for the 2000 census to attract more qualified workers and to reduce turnover.

For the 2000 census the Geography Division has two major projects:

- TIGER files--maintenance and enhancement
- Master address file--geocoded list of all housing units in the nation

1994 legislation required the U.S. Postal Service to share its delivery sequence file (DSF) with the Bureau. The Geography Division will compare the DSF to the TIGER files to update the address ranges. In order to geocode more addresses, the Bureau is working with appropriate authorities to monitor the conversion of rural-style addresses (such as P.O. boxes and rural route numbers) to urban-style addresses (a number and a street).

TIGER is also based upon 1970s and '80s technology and will need to be brought into more modern concepts.

Also, in the plans for the 2000 census, collection unit boundaries and tabulation boundaries will be separated. This division should help with privacy issues.

Census Designated Places (CDP) are also undergoing a definition change. In the past CDPs always had a minimum population size. With the 2000 census any unincorporated place may be designated as a CDP.

In another major change, Native American Tribes, recognized by Congress, with land will be treated as nations, with separate counts for each tribe regardless of location. The tribes will declare their land boundaries to the Census Bureau. In the past, the Census Bureau used boundaries from the Bureau of Indian Affairs. Formerly, each Native American Tribes was counted by state. To get an accurate count of the number of persons in the tribe, researchers had to add all the state counts together. With this new organization each tribe will be further divided according to subdivisions agreed upon by the tribes.

Council members asked Joel to speak about the recently announced Cooperative Research and Development Agreement (CRADA) with the Environmental Systems Research Institute (ESRI). Joel discussed an earlier agreement with Geographic Data Technologies (GDT), a company that collects detailed street and address information. GDT uses ESRI software, and the new Crada will make it easier for state and local governments to send data to the Census. ESRI software, in particular Spatial Database Engine (SDE), also will allow for the efficient transfer of information between GDT and Census, and will help all organizations identify software and processes to help these activities and to jointly evaluate the software and procedures. The Bureau might also use existing ESRI software and census data to produce new products to access data, in addition to the current Landview software.

Joel also described the American Community Survey. The Census Bureau will sample 400,000 housing units per month, in

the years 1999, 2000 and 2001 using long form questions. It then will compare the results to the actual decennial census long form tallies. Presuming that there will be little difference between the two measures, the Bureau will sample 250,000 households monthly, keep a five year running average, and establish a process for continuous update. The results will be a continuous update to the decennial censuses. Some issues regarding sampling for the 2000 census still have to worked out in Congress.

Finally, Joel brought the Council up to date on plans for DADS (Data Access and Distribution System). A second DADS prototype is due in September. DADS is expected to allow end users to produce custom reports from electronic census data, which will be available primarily on the Internet for the 2000 census. A few predefined tables will be available and third-party vendors are expected to step in, as well, to provide custom reports for users. The Bureau may be looking toward more Cradas to aid in the development of DADS.

U.S. Bureau of the Census
Rick Hartgen
Products and Services Branch, Geography Division

Rick demonstrated the Bureau's web site at <http://www.census.gov>. The Geography Division's pages are in the TIGER section, which includes the TIGER on-line mapping service and gazetteer. This was the first free mapping service available on the web and is the basis for many others. Rick noted that the TIGER/Line 94 is no longer supported, having been superseded by TIGER/Line 95, but the TIGER/Line 92 continues to be supported as the only link between 1980 and 1990 census geography. Rick noted that the What's New section of the site often contains updates on Census 2000 planning. Rick has the necessary, but often thankless job of answering e-mail questions about the site and about Census data. He often uses both the Census web site and other government sites to answer queries and has found the Minerals Management Service site (<http://www.mms.gov>), as a good place to begin when looking for government data. Rick mentioned that the telephone help number for the Geography Division is 301-457-1128 and the telephone help number specifically for CD-ROM products is 301-457-1324.

In other news, Rick announced that LandView 3 is in beta testing and should be available soon. Airports, schools and more railroads have been added to this latest version. He also noted that for the 2000 census, the Bureau will discontinue using the term Block Numbering Area (BNA) and will use the term Tract in every county, whether or not a Local Area Committee was involved in creating the boundaries.

U.S. Bureau of the Census
Tim Trainor
Head of Cartographic Operations, Geography Division

Tim noted that the Geography Division actually contains two mapping branches:

- Tiger -- for field mapping
- Cartographic Operations Branch -- responsible for four mapping operations:
 1. Reference maps (state and county outlines)
 2. Reference outline maps (include some features)

3. Thematic maps
4. Boundary files

The Bureau has moved to a mapping-on-demand process, and therefore electronic products dominated the conversation. Cartographic Operations relies primarily on the Map Image Metafile (MIM) to create maps. This is a device independent file, that may not be as important in the future as improvements in import/export capabilities continue. Similarly, the Bureau is not committed to Adobe's Personal Document File (PDF) format, but is experimenting with several output formats.

Tim mentioned that DADS should contain some interactive mapping capability. The map gallery part of the Census web page is part of Cartographic Operations' responsibilities. They are also looking toward producing an electronic atlas of congressional districts on CD-ROM. We can also expect an electronic National Atlas produced by the U.S. Geological Survey in cooperation with the Bureau of the Census.

May 9, 1997 9 am

Government Printing Office
Robin Haun-Mohamed
Chief, Depository Administration Branch

Friday's CUAC meeting of agency visitors opened with a report by Robin Haun-Mohamed, Chief, Depository Administration Branch of the Government Printing Office (GPO) who began the presentation by distributing copies of the Recommended Specifications for Public Access Work Stations in Federal Depository Libraries. This supersedes the May 1996 document that was recommended by CUAC last year. The current document integrates specifications for computers to handle spatial data and other depository data into one document. Robin asked CUAC members to review the document and respond to Lee Morey at GPO with comments by May 15, 1997.

The Library Program Service has worked all year on the transition program on many different fronts. Available now electronically is Pathway and the Monthly Catalog, they have made a number of reimbursable agreements for free public access, have written orders for electronic products, provided electronic source files through GPO Access or via tangible products. They also have encountered problems in providing access to some raw data files from some agencies.

Software packaged with data continues to be a challenge and is a matter of what the Federal Depository Library Program (FDLP) can pay for. It is handled in one of three ways:

1. The agency contracts with GPO for production of the product,
2. The agency provides copies to GPO,
3. The agency provides no-fee access.

Library Program Service has had a number of success stories during the year, such as the Tide Tables on CD-ROM which resulted from an agency contact during last year's CUAC meeting, and the V-Map Level 0 (Digital Map of the World) which will be distributed to depository libraries. Robin currently is pursuing HUD Community Planning Software on a suggestion from Melissa. Robin encourages us to alert her to anything that should be in the program.

During the past year Robin has met several times with USGS to discuss distribution of the Digital Raster Graphics (DRGs) and Digital Orthophoto Quadrangles (DOQs). USGS will not continue to stock these products and will produce copies only to fulfill individual orders. GPO and USGS are discussing alternatives for the depository libraries. One scenario would have libraries order the CD-ROMs at a cost of \$32.00 each and the bill would be picked up by GPO. No decision has been reached and discussions between USGS and GPO will continue.

Robin suggested that CUAC prepare a recommendation to Gil Baldwin, Chief of the Library Division of GPO, for our idea of distributed access for DRGs and DOQs. The files could be distributed across many institutions and made available for download. One copy of every disc available could be made available on-line from some institution somewhere to everyone else.

Depository libraries will now make item selection changes on-line. The old green cards have been discontinued. Libraries can expect instructions for the new item selection process to arrive in June 1997.

Robin attended the remainder of the meeting, exchanging information with all other agency presenters. This is a particularly valuable contribution to the meeting and aids the Council's efforts to insure that all cartographic products are accessible through the depository program.

U.S. Geological Survey
Hedy Rossmesl
Senior Program Administrator
Data Delivery

Hedy presented information on changes within USGS. USGS no longer looks at geography only in quadrangles. Data will be delivered on a broader basis, and the database will be dynamic. USGS is working towards greater cooperation with federal and state agencies, and private enterprise. Some examples include working with the Department of Agriculture on the DOQs, working with the Forest Service to update 7.5-minute quads, working with the Environmental Protection Agency on River Reach data, and a possible project with the Park Service. A private company is working on a Digital Raster Graphics/ Digital Elevation Model (DRG/DEM) composite.

Hedy reported on the distribution of DRGs and the Digital Orthophoto Quadrangles (DOQs). USGS will not hold a stock of DRGs and instead will press copies of the CD-ROMs only to fill orders. USGS and GPO are discussing alternatives for depository distribution. Approximately one-fifth of the DOQs necessary to cover the nation are complete. All of the United States should be done by 2001 and they should be revised on a continuing basis thereafter. At the present, DOQ distribution from GPO is on hold. We can expect the DOQ distribution to follow the decision made concerning the DRGs. Hedy noted that the DOQs are available, for purchase, online through the EROS data center. The DOQs available at EROS are uncompressed, the files on the distributed CD-ROMs are compressed jpegs. USGS plans to use the EROS Data Center to distribute many electronic products to buyers. She emphasized that as the files are updated, USGS does plan to archive the older editions.

7.5-minute topographic quadrangle distribution in paper will continue through GPO for the foreseeable future. More revisions should be coming out in the next few years. Revisions are performed when a cooperating agency has paid for revisions, or for maps with heavy sales. The reprint turn-around for out-of-stock maps is about two weeks. The US Forest Service is revising the quads covering its lands; still unresolved is the issue of updates where sheets cover land both inside and outside of Forest Service areas.

The Council inquired about the New Publications Catalog. The 1995 edition has been published, and the 1996 edition will be compiled quarterly with an annual cumulation. The only index will be in the annual edition. Cumulations other than annual are unlikely. The monthly version will continue on the Web. The latest issues contained an address update card. Libraries should return the card to keep receiving the catalog.

Hedy and Robin also commented on the possibility of providing USGS shipping lists via the Internet. Both thought that this was a possibility. Librarians can contact Rea Mueller at 703-648-5954 for shipping list problems.

The National Atlas of the United States project is underway. The atlas likely will be issued only in electronic format, probably CD-ROM and/or via the Internet, and will be updated regularly. It will not replicate other privately produced products. The focus is to bring scientific data sets together (e.g. geologic, water resources, biological), with census data, plus other federal agencies' data later.

The Council asked Heidi about the recent Topographic Map Users Workshop held at USGS. Approximately 50 guests, representing a wide variety of topographic map users were invited to participate in the day long workshop. Cooperative partners, state agencies, federal agencies, educators and librarians were some of the participants. USGS solicited comments about current topographic products and future directions.

Federal Geographic Data Committee

Barbara Poore

Barbara noted that the Federal Geographic Data Committee (FGDC) has been operating since 1990 and that the National Spatial Data Infrastructure has been in place since 1994. The major goals are to foster cooperative data sharing and to create a national system of interoperable data. Currently 14 federal agencies, 18 state governments and several local agencies are cooperating participants.

The FGDC has three divisions: Framework, Clearinghouse, and Standards. The Standards group is working on definitions and guidelines for spatial data creators and users. These community based standards allow users to share data more readily. FGDC has been working with data producers to define everything from wetlands and vegetation to soils and cadastral terms. One of the FGDC's largest projects, metadata standards, is in the revision process now. FGDC is accepting comments for revision to the metadata standards until early in July. This process will be conducted mostly on-line. See the web site at <http://www.fgdc.gov> for details.

The Clearinghouse group works on data discovery and distribution. Instead of a central repository for data, FGDC encourages data producers themselves to hold, maintain and

distribute their data. This distributed, electronically connected network of geospatial data producers will make data distribution more economical and more effective. The Framework group sets the vision and charts out the work of the committee.

FGDC has several grant opportunities for agencies, libraries and others interested in furthering the mission of the committee. Again, the web site contains more details.

National Imagery and Mapping Agency

Jim Lusby

Supply Systems Analyst

Jim Lusby, from the Distribution Division of the National Imagery and Mapping Agency (NIMA), formerly the Defense Mapping Agency or DMA, began with a review of NIMA's mission. The focus is moving strongly towards digital imagery and away from paper mapping. The agency's core business consists of digital information production and analysis, the collection of satellite and aerial imagery from various sources, and the dissemination of this information. Although there had been plans to convert entirely to digital products by the year 2000, because of concerns from the military services over 24-hour availability of servers, paper map production can be expected for many more years.

Under the new NIMA organization, staff report to both the Secretary of Defense and to the Director of Central Intelligence. This helps reduce duplication of effort as well as combine the strengths of both agencies. Jim discussed the addition of several new centers with the consolidation. The headquarters is still in Fairfax, VA. The customer support teams, with whom depository libraries primarily communicate, are in Reston, VA. Problems with large processes, such as the relationship between NIMA, GPO, and libraries, are handled by the National Support Team at 703-264-3012. Database operations staff, who deal with everyday distribution problems, can be contacted at 301-227-3099.

There was discussion about how some libraries have been dropped from NIMA distribution. There was also a problem in the last three years with item adds and deletions that libraries sent to GPO not being picked up by DMA/NIMA. This had to do with DMA/NIMA not being able to handle GPO's computer tapes. Robin Haun-Mohamed added that GPO plans to survey libraries regarding their NIMA selections and to work with NIMA to solve these problems. NIMA understands its Title 44 requirements to support the depository program, and will not require a policy directive to provide this support.

The really big news is that distribution of NIMA maps will be transferred to the Defense Logistics Agency (DLA) as of April 1, 1998. NIMA will be responsible for warehousing the digital data in St. Louis and producing custom products. Production of paper maps will eventually be outsourced to non-NIMA sources. DLA will handle distribution of hard-copy products out of Richmond, VA, known as an Inventory Control Point (ICP), after next April 1. Hard-copy refers to paper products as well as CD-ROMs--that is, anything produced in a production run that results in a stored physical inventory. After the transfer to DLA, Jim will do his best to emphasize depository requirements to the people at DLA, who are accustomed to storing and distributing large volumes of

day-to-day supplies. DLA will need to supply National Stock Numbers (NSNs) to maps that they distribute. Due to their particular procedures, DLA produces shipping lists with one sheet for each item.

On miscellaneous matters, Jim mentioned the DMA-MUSE (Manipulation Utility Software Environment) software available from the Internet that can be used with some of NIMA's digital data. The PAIGH (Pan American Institute of Geography and History mapping program, maps formerly distributed by DMA), is no longer operational and no new maps will be produced through this program. There was a problem with some countries using different standards than DMA in the production of these maps.

The update to the Digital Chart of the World CD-ROM, called V-Map Level 0, sounded like it has promise, but is delayed due to a bug found in the software. The data on these CDs can be used with major GIS software packages or with DMA-MUSE.

The Pan American Institute of Geography and History (PAIGH) mapping program is no longer operational and no new maps will be produced. In the past, DMA provided specifications and standards and individual nations created the maps that were then distributed by DMA.

The approximately 600 1:250,000 scale Joint Operations Graphics (JOG) maps that are distributed by the USGS will be fed into the depository program.

National Oceanic and Atmospheric Administration
National Ocean Service & National Environmental Satellite, Data and Information Service
Sharon Kemp and Commander Eric Davis

Sharon Kemp attended the meeting for Fred Anderson, our usual CUAC contact. Sharon announced that Aeronautical Charting and Cartography (AC&C) will be moving to the Department of Transportation. They do not know exactly where but there are three possibilities:

1. AC&C transfers intact to the Federal Aviation Administration
2. AC&C transfers intact to the Transportation Administrative ServicesCenter (TASC)
3. Split AC&C with the Compilation Division going to the FAA and the Reproduction and Distribution Divisions going to TASC.

The Deputy Secretary of Transportation will make the final decision soon. Regardless of the final decision, AC&C will continue to distribute aeronautical and nautical products.

Sharon and Fred Anderson recommended that CUAC contact Dr. D. James Baker, Under Secretary of Transportation, to assure that AC&C's participation in the Depository Library Program continues. AC&C is still committed to working with GPO to provide direct distribution of aeronautical and nautical products and depositories can expect 300 to 350 updated nautical charts this year.

Sharon introduced Commander Eric Davis of National Environmental Satellite, Data and Information Service (NESDIS). NESDIS runs the NOAA library in Silver Spring, Maryland and has branches in Seattle and Miami.

NESDIS operates the following date centers:

1. National Oceanic Data Center (NODC) - Silver Spring,

Maryland

2. National Climatic Data Center (NCDC) - Asheville, North Carolina
3. National Geophysical Data Center (NGDC) - Boulder, Colorado
4. Satellite Active Archives - Suitland, Maryland

The Data Centers distribute smaller data sets free on the World Wide Web and larger data sets for fee on CD-ROMs and diskettes. These Data Centers are collecting data from all parts of NOAA, regardless of format, and are archiving it in digital format. They are working on software to recognize handwriting to convert old handwritten climatic records to a digital format.

NOAA is working on a web order site where all products can be ordered online. Their current web site is located at:
http://www.noaa.gov/nedis/nedis_intro.html

Unfortunately, most of these materials have not been included in the FDLP. CUAC suggested that the GPO and NESDIS work together to bring these materials into depository distribution. Commander Davis offered assistance in locating a contact person within NESDIS.

U. S. Bureau of Land Management
David E. Meier
Cartography, Photogrammetry, Remote Sensing

Mr. Meier recalled a time 15 years ago when his agency was remiss in supplying depository libraries with cartographic products, largely because BLM's state offices had no knowledge of rules and regulations. With former CUAC chair Linda Newman, Mr. Meier has tried, successfully, to revise this situation. Each state office has a designated Printing Officer to guide cartographic materials into the depository program.

Mr. Meier outlined BLM's major responsibilities for the 264 million acres it manages. Responsibilities include resource management, both surface and sub-surface; land records management; and support functions such as mapping.

BLM cartographic products distributed to depository libraries:

1. 1:100,000-scale surface management status on USGS base
2. 1:100,000-scale surface/minerals management status on USGS base. Both of these are printed and distributed by the USGS.
3. 1:500,000 & 1:1,000,000 - scale state surface management maps Printed by the USGS.
4. State recreation maps
5. 1:1,000,000 state wilderness status maps
6. Special area maps

State offices may on occasion produce a map that does not enter the GPO pipeline, but very rarely.

Recreation maps are now taking on a more uniform appearance and sometimes, as in the case of the new Arizona recreation map, relief shading has been added.

1:100,000 scale BLM map production
FY 1995 110 different maps published 236,000 total copies
FY 1996 100 different maps published 245,000 total copies
FY 1997 200 different maps published projected.

Special Map Production
FY 1995 7 maps published 50,000 total copies

FY 1996 4 maps 40,000 total copies
FY 1997 1 map 10,000 total copies

BLM cartographic projects now and for the future:

1. Establish automated inventory management program for maps and some book publications.
2. Publish as much as possible on the Internet.
3. Publish a publications and map catalog on the Internet.
4. Take and fulfill orders via the Internet (Fall 1997) for maps, environmental impact statements, land status records, mineral plats, etc.
5. Continue to participate and cooperate with the Federal Geographic Data Committee.
6. Continue to build geographic corner point data base as part of a national digital data base. Make available on the Internet as each state is completed.
7. Advance Automated Land and Minerals Record System. Digitizing and geo-referencing original survey records such as GLO township plans, survey notes, mineral entries and original land patents.

Mr. Meier will retire soon so he provided two addresses for people critical to the smooth distribution of BLM maps to depository libraries:

Lee Campbell, Printed Materials Distribution Service (PMDS)
Bureau of Land Management
Bldg. 50 BC-650B
Denver Federal Center
Denver, CO 80225
303-236-9422
fax 303-236-9470
lcampbell@enc1155wp.sc.blm.gov

Ordering Information
Robert Stahl (PMDS)
Bureau of Land Management
Bldg. 50 PMDS
Denver Federal Center
Denver, CO 80225
303-236-1975
fax 303-236-0845

Library of Congress, Geography and Map Division
Betsy Mangan, Head of Technical Services

Betsy graciously filled in for the Division Chief, Ralph Ehrenberg, who had a last-minute conflict.

The Geography and Map Division (G&M) is in the midst of a reorganization reducing the number of managers and supervisors from eight to five. They have combined four technical service areas into two teams: a cataloging team and a collections management team. Betsy is now Head of Technical Services.

There are currently 58 staff at G&M of which 52 are permanent positions and six are gift funded. Included in the 58 are 13 vacancies. Partially due to the pending reorganization, G&M was unable to hire staff from the years 1990-1995. G&M is one of a few divisions at the Library of Congress growing in size.

Two support groups complement G&M. The Center for Geographic Information is concerned with the digital

environment. Membership is \$500 for associate members and \$5,000 for regular members. The group is currently composed of 24 businesses that provide guidance and direction, software, and hardware. The Philip Lee Phillips Society currently has 120 members and emphasizes historical acquisitions, historical cartography, and research. Membership ranges from \$50 to \$1,000.

The National Digital Library (NDL) Program for Cartographic Materials is well underway. Projects include:

1. Panoramic Maps. Conversion to digital format started with panoramic maps and is being completed alphabetically by state. G&M is currently working on the state of Missouri. Ten maps of Alabama are in the test area for LC. Prior to ALA in June, these and others will be available on the net: <http://lcweb.loc.gov/rr/geogmap/gmpage.html>
2. Civil War Maps. LC is planning to contract the scanning of the color 105mm fiche. G&M will still have to process image after scanning.
- Civil War Bibliography. Converting bibliography to MARC using SGML and following EAD.
3. Yellowstone National Park. 26 maps for USGS to be used in a web exhibit to celebrate the upcoming park anniversary.
4. American Colonization Society Collection consisting of 28 items covering Liberia.
5. Portuguese Embassy. 22 maps for the Portuguese Embassy for an exhibit of Portuguese immigration to America. It will be a traveling exhibit.
6. Facsimile atlas for the Pope.
7. Occasional gifts for librarians to be given to retiring members of Congress.

Betsy indicated that G&M is charging overtime to those projects (some of the above) which fall outside the NDL program. In addition, they are currently working on a pricing system for the public.

Materials are being scanned (not digitized or geo-coded) at 300 dpi raster - Tiff using MrSID compression technology. (MrSID was donated by LizardTech.)

G&M is also processing images for the web, but have experienced problems with hardware breaking down, software, and compatibility issues.

Betsy showed overheads of what MrSID can do. Using a panoramic view she demonstrated that MrSID is able to increase resolution as one narrows in, it is seamless, and the ability to pan an image will be available shortly.

G&M is being careful about working with non-copyrighted material or photographs. Betsy also indicated that a 752 field will be added to MARC records. The field will be a hierarchy of geographic names. For example, it would start with United States followed by a state, then a county or region, and finally a city.

Betsy also indicated that G&M is planning a Centennial celebration from November 20-22, 1997. The first night will include a reception in the foyer and an opportunity to view an exhibit of Portuguese cartography. Presentations will be made by the Center for Geographic Information and the Philip Lee Phillips Society on developing, curating, and using cartographic collections. The celebration will also kick off a 3 year promotion of the G&M Division. Town meetings will be held throughout the US sponsored by different state agencies and historical societies.

In addition, tours of historically significant places will be provided by G&M staff. 200 years of mapping at LC will be celebrated by the end of the year 2000. ----- Richard Spohn, CUAC

Report on GIS Digital Database Forum October 19, 1997

The 1997 Digital Database Forum, chaired by Vivienne Roumani-Denn, focused on electronic journals in the earth sciences. Six speakers representing commercial and society publishers spoke about their products and shared personal insights into electronic publishing. A broad spectrum of access methods, system features, and pricing models emerged from the presentations.

David Ades from the American Institute of Physics began by discussing the role of "aggregators" in collecting, organizing, sorting, and delivering Internet information -- whether from primary publishers or indexing and abstracting services. Through its Online Journal Service (OJS) and PINET Plus (which provides a gateway to the SPIN database, membership directories, conference information, etc.), AIP aims to build a unified entry point to the physics literature. "Reference linking" is the latest innovation at OJS: the citation list at the end of each paper is hyperlinked to corresponding abstracts from the SPIN and INSPEC databases. Building the links is time-consuming work and will not be completed until March, 1998. External hyperlinks are also being developed, to enrich papers with audio, video, "live" equations, and links to comments and errata. Ades noted that, in a significant move, AIP has for the first time recognized the electronic version, not the print version, of one of its journals (*Physical Review D*) as the official "journal of record." Articles are published electronically as soon as available; when enough contributions accumulate to warrant a print issue, they are bundled and issued in paper format.

John Tagler, representing Elsevier Science, gave a history of Elsevier's experiences in electronic publishing. "Elsevier Electronic Subscriptions" (EES) was introduced in 1995, providing cover-to-cover image maps (TIFF format) of all Elsevier journals. The files are delivered to libraries on CD-ROM or tape for mounting on local servers. EES format will shift to PDF and HTML in the next 12-18 months. "Science Direct" is Elsevier's new Web-based service; a late 1997 release of life science serials is planned, and by 1998 all 1,100 Elsevier journals will be online. Pricing will likely include annual "platform fees" based on the number of users and level of functionality; "content fees" (subscriptions); and optionally, "transaction fees" (for non-subscribers). *Earth and Planetary Science Letters Online* was discussed at length: currently 300 articles/year are published electronically, with 70% of the cited references hyperlinked to GEOBASE abstracts. Supplemental datasets not available in the print version are published online. Other features include a keyword thesaurus, e-mail directory of authors, and greater use of color illustrations (at no additional charge to the authors).

Keith Seitter spoke about the American Meteorological Society's plans to put its seven journals online in 1998. Coverage is in atmospheric sciences, physical oceanography, and surface hydrology. Password/username access will be offered to

individual members; library access will be controlled by IP verification, with pricing in tiers based on the number of workstations in the department or institution. The AMS has committed to providing all subscribers will "perpetual access" to the years of the journal(s) they have purchased. In addition to links for comments and corrigenda, "forward references" will be added, offering citation-index style capabilities. Four papers have been published to date in *Earth Interactions* (EI) -- an electronic-only journal of earth systems science co-published by the AMS, American Geophysical Union, and Association of American Geographers. EI offers animations, live math, links to data archives, and reference linking to Meteorological and Geostrophysical Abstracts. Seitter demonstrated an animation of subducting slabs and mantle convection from a recent paper. Currently, only Windows users can take full advantage of EI's sophisticated features, as they require an SGML Web viewer (Panorama). PDF versions are provided for Mac and Unix users; an HTML version is planned.

Springer-Verlag's Wolfgang Engel gave an update on the LINK information service. By 1998, all 400 Springer journals will be online on LINK, approximately one month before print publication. Full-text formats include PDF, HTML, Postscript, and TeX. Search capabilities are extensive: Boolean and phrase searches, global or field-specific, may be conducted in a single journal, a subject collection (geosciences, chemical sciences, etc.), or across all journals. LINK currently provides free access to everyone down to abstract level; only subscribers can view the full-text of articles. Springer's institutional licensing arrangements for 1998 provide print subscribers with free access for up to three simultaneous users. For unlimited access, academic libraries will pay a 25% surcharge per subscribed journal, and corporate libraries, 30%.

Ronald Hart, who has been active in AAPG's electronic publishing program through Datapages, Inc., put the information needs of practicing geoscience professionals in perspective, stating that engineers and field geologists are interested in "data and ideas," not "formal publications." Recognizing that much useful information is languishing in unpublished company reports, field exploration maps, dissertations, and older "classic" papers, Hart has developed *Search and Discovery* -- a highly informal online "journal" devoted to previously unpublished or hard-to-find data. He also spoke about the emphasis of publishing at the American Association of Petroleum Geologists, which largely serves a pragmatic, non-academic community. The *AAPG Bulletin 1917-1996*, currently available on CD-ROM, will be placed online in 1998 to selected corporate clients; access may be broadened later.

Finally, Cliff Mills, representing John Wiley & Sons, announced the launch of his company's new vehicle for full-text journal access, Wiley InterScience. All 400+ Wiley serials will be online on InterScience within 18 months. After resolving some technical difficulties, Cornelius Klein gave the audience a live demonstration of crystal structure simulations from "Mineralogy Tutorials on CD-ROM" -- one of several Wiley products offering 3-D models and animations in interactive media.

The Forum concluded with a question and answer period. Topics included restrictions on interlibrary loans of electronic journals (John Tagler observed that "there is no fair use

convention for electronic documents; existing conventions apply only to print photocopying"), and opportunities for increased collaboration between publishers, through interlinking of publications. ----- Shaun Hardy

Annual Report of AGI Member Society Council Representative.

During 1996-97 I have attended two meetings of the AGI Member Society Council. The first was held in conjunction with the AAPG Annual Meeting in Dallas on Monday April 7, 1997. The second was held on Monday, October 20, 1997 in Salt Lake City in conjunction with the GSA Annual Meeting. For each of these meetings a report has been written reporting GIS activities for the Member Society Council semi-annual report. Two articles have also been written for the GIS Newsletter recording these meetings for GIS members.

Respectfully submitted,
Barbara E. Haner

AGI Member Society Council Meeting Monday, October 20, 1997 - 8:00 - 12:00 noon Little America Hotel. Salt Lake City, Utah

The meeting began promptly at 8 a.m. with Ed Roy, President of AGI welcoming the newest member and 31st member of AGI, the Paleontological Research Institute. A concern of this society is the recent sale of Tyrannosaurus Sue for \$8.3 million which has serious implications for paleontologists collecting material on private lands with \$ suddenly being attached to fossil material.

Reports of AGI Officers

Marcus Milling discussed the continuing National Data Depository Facility. Currently two discussions are underway; the possibility that AMOCO could transfer its core facilities to AGI and part of Stapleton Airport facility could become a core depository. This would also allow a research office to be attached to the facility for both use and preservation research. The treasurer, Donald Hull reported that AGI is in its strongest position ever with 31 members and assets of 8.5 million dollars which includes cash of 4.1 million dollars. The AGI Foundation report by Jan van Sant indicated the expansion of the program to 45 trustees which support four programs:

- K-12 education
- Internet College Course developed by SEG
- Congressional Fellow Program
- Environmental series.

Discussion also indicated that in the future member societies of AGI will be able to apply for grant support from this foundation. This could occur as early as 1999.

Special Programs/Presentations/Activities

The International meeting of Geoscience Presidents and Executive Officers which will be held in Washington DC on November 17. The object of this meeting is to consider the

international programs and opportunities for geoscientists as we approach the 21st century. Presenter was Ed Roy, President of AGI.

Plans for AGI 50th Anniversary Celebration in 1998 were discussed by Sam Adams. Already Earth Science Week has been designated as the second week in October and has been recognized by a number of states. Other activities will include a workshop at the Academy on the 14th November and an anniversary celebration on the 15th and 16th in Washington DC. Special activities associated with the annual meeting of AAPG and GSA. There will also be articles on each member society in Geotimes beginning in January 1998.

A proposal for a Membership Directory of AGI Members was presented as a working brief by Cheryl A. Mannes of Harris Publishing. Harris publishes over 90% of all academic alumni directories. The creation of the database would also enhance the ability of AGI to do statistical reports. For each member up to 5 affiliations could be cross referenced with other information including primary geoscience specialty, current job position, work experience, and degrees. The cost would be less than \$60. If approved by member societies it could be published by late 1998 as part of the AGI 50th celebration. AGI will not sell or loan the database. It was decided that representatives should refer back to their executive boards and members before the project went forward.

Opportunities in Electronic Publishing was a presentation by Hunt Williams of the new Community of Science GeoRef interface. It was demonstrated so that the full power of online linking to other documents could be shown. It was suggested that this could also become a forum for the presentation and preservation of large data sets. It was proposed that a working group should be created which would work to develop a common bibliographic interface.

Inside Science is a series of ½ minute television clips which have been used successfully by the American Chemical Society and the American Institute of Physics to highlight careers in chemistry and physics. Pat Leahy reported to the members that the USGS had committed \$75,000 to AGI to create similar short news clips featuring geologists at work. These clips can reach 3-13 million television viewers

Ethics in the Geosciences was a proposed code developed after a GSA Presidential Conference on this topic. Although it was felt that the statements as presently developed were too broad it was felt that there were unethical practices in the geosciences especially when dealing with engineering and environmental problems in law cases. The topic was tabled until the next meeting.

A Member Society Joint Council Catalog was discussed at the last meeting. Julie Jackson discussed the proposal to create a 32 page publications brochure. Fees would be \$600 for a page if under 2000 members and \$1200 if over 2000 members. Pages must be camera ready and it would be possible to have a half page. The catalog will be distributed to over 60,000 individuals so the cost to reach that many people is very small and would be good publicity for the society.

EarthComm is the Natural Science Education Standard for K-High School Curriculum. By being recognized as a national standard this now means that geology becomes an integral part of

the physical sciences curriculum along with physics and chemistry in schools throughout the country. Richard Busch also showed some of the program highlights from a high school teachers program in the summer of 1997.

Geoscience Congressional Fellowship. AGI will be sponsoring a congressional Fellow who will complement other existing fellowships sponsored by the AGU, GSA and SSSA. This will give the geosciences a greater prominence and continue the influential work of David Applegate in the Government Affairs Program.

Multidisciplinary Web-based Training was introduced by Susan Landon. This program has been developed by SEG and the Colorado School of Mines. It is described in the July 1997 issue of the *Leading Edge*. It has been well received and presents a new challenge for interactive learning and positive reinforcement of earth science techniques.

The meeting ended at 12 noon and an oral presentation of this report was presented at the GIS Annual Business Meeting. At this meeting it was agreed to support both the Membership Directory and Joint Member Council Catalog initiatives. Letters have been written to this effect to Marcus Milling.

Submitted by
Barbara E. Haner,
GIS Member Society Council Representative

Annual Report: Archives Committee

The Geoscience Information Society Archives are housed in the University Archives at the University of Illinois. The GIS Archives contain historical documentation of the Society, files and reports of past GIS officers and committee chairs, and GIS publications. Materials received by the Committee this past year have been reviewed and forwarded to the University Archives. Additional materials should be sent to:

Mary Krick,
ISGS,
615 E. Peabody, Champaign, IL 61820.

John Kawula continues to serve as our official photographer.

Respectfully submitted,
Mary Krick

FGDC Utilities Data Content Standard

The FGDC Utilities Data Content Standard is now open for public review.

It is the intent of this standard to define the set of common utility system information for the community of users that capture and use geospatial information about utility systems. The standard

specifies the semantic geospatial information for utility systems, including names, definitions and domains for utility system components that can be geospatially depicted as feature types and their non-graphical attributes.

Comments are encouraged about the content, completeness, and usability of the proposed standard. Comments are requested specifically on the following topics:

- additional required data content for utility systems (i.e., features, attributes, domains)
- existing defacto or ad hoc utilities standard(s) (e.g., internal organization schema, published documents, etc.)
- issues on implementation

Please send comments by E-mail to: gdc-util@usgs.gov
Or, send one hard copy version of the comments and a soft copy version on a 3X5 diskette, Word Perfect 6.0 to:

Utilities Data Content Standard Review
c/o FGDC Secretariat (attn: Jennifer Fox)
U.S. Geological Survey
590 National Center
12201 Sunrise Valley Drive
Reston, Virginia, 20192

Copies of the standard can be downloaded from http://www.fgdc.gov/Standards/PR_Announcements/Standards/PRstandards.html, or hardcopies can be requested through the above internet and mailing addresses.

All comments must be received by **February 6, 1998**

UPCOMING CONFERENCES

AESE/CBE/EASE/GeoInfo VI

You should have received with your last GIS Newsletter, the first announcement of the joint meeting of the AESE/CBE/EASE/GeoInfo VI meeting in Washington D.C. on September 10-14 1998. This information is also available on the WEB at: <http://earth.agu.org/editorinfo98>

I urge you to respond or to look at this site where you can express your interest in being placed on the mailing list for the second announcement.

I recently attended the Association of Earth Science Editors meeting in Boulder, Colorado, with Paul Shelley from AGIA. We feel it will be a very interesting meeting with a very broad scope and the opportunity to meet people from different arenas who are working with geoscience and scientific information.

If you have not responded indicating your interest I urge you to do so.

Barbara Haner

ANNOUNCEMENTS

GREAT OPPORTUNITY ** LAST CHANCE

Geoscience Information Society Meeting Proceedings
- **Special Inventory Sale** -
Only \$10.00 per volume 1989 - 1994 (vols. 20 - 25)

Contact: Lois Heiser, Publications Manager,
Geology Library
Indiana University,
Bloomington, Indiana 47405
Prepayment required.

LITERATURE REVIEW

by Miriam Sheaves

A recent issue of *Library Acquisitions: Practice & Theory* v.21(3), 1997 summarizes papers delivered at two conferences last Fall, related to electronic issues: the Charleston Conference (South Carolina) and the Elsevier Electronic Subscriptions Conference, which was held in the Netherlands in October, 1996. Several of the papers were of interest, among them the following: "Electronic Resources Collection Development Policy Statement Workshop: A Preconference" (good summary of this workshop), (Chadwell, p.239); "Approaches to Internet-Based Collection Development: Models, Trade-Offs, and Issues" (Brown, p.241); "The New Virtual Serial Library: A Report of a Presentation" (Mack, p.251); "ICI Scientists Benefit from Electronic Access to Journals" (Walton, p.387); and "A Generic Approach to the Electronic Access of Scientific Journals: The Decomate Project" (Dijkstra, p.393).

An interesting article on a journal use study appears in *Library Resources & Technical Services* v.41(2), 1997, p.101-111. In "Chemistry Journal Use and Cost: Results of a Longitudinal Study", Tina Chrzastowski and Brian Olesko discuss a study undertaken at the University of Illinois, Urbana-Champaign, in the years 1988, 1993, and 1996. Their study includes data on both bound and unbound periodicals, and findings confirm the 80/20 rule (84% of use generated by the top 100 journals). They suggest other applications for longitudinal use data.

There are two articles of interest in *Searcher* v.5(6)1997. Bob Buntrock discusses WilsonDisc, General Science Index and Applied Science and Technology Index (both databases have abstracts on the CD-ROM version) in "Sci-Tech Information for the Common (Wo)Man" (p.22-26). Another article, "Knight-Ridder on the Web" discusses the pros and cons of searching DIALOG on the Web, and offers searcher tips (p.28-37).

Linda Musser brought to my attention an article by George Machovec, Technical Coordinator of Colorado Alliance of Research Libraries, "Electronic Journal Market Overview - 1997". This is an excellent discussion which summarizes many of the electronic publishing projects, such as ProQuest Direct, JSTOR, Project Muse, and IDEAL. It is accessible from CARL's Web Page at <http://www.coalliance.org/reports/ejournal.htm>.

MEMBER NEWS

New Members as of August 1997:

David Davis is with the Nevada Bureau of Mines and Geology.
Ph: 702-784-6691 x133 Fax: 702-784-1709

Mailing address:
Nevada Bureau of Mines and Geology
MS-178
Univ. of Nevada, Reno
Reno, NV 89557
E-mail: ddavis@nbgm.unr.edu

Carol Fedora is an Information Specialist at Community of Science, Inc. in Baltimore, Maryland.
Bus. Phone-- 410-563-5383. E-mail-- caf@cos.com.

William Hosler is with the Dept. of Geological Sciences at the University of Oregon.

Mailing address:
Dept. of Geological Sciences
University of Oregon
Eugene, OR 97403-1272

Karen Pique is the AAPG Geoscience Librarian at the AAPG Foundation in Tulsa, Oklahoma.
Bus. Phone-- 918-560-2620.
E-mail-- library@aapg.org.

Lou Pray is Research Librarian for Los Alamos National Laboratory, New Mexico. Bus. Phone: 505-667-5809 Fax: 505-665-2948

Mailing address:
Rt. 5 Box 219A
Santa Fe, NM 87501
E-mail: lpray@lanl.gov

Dr. David Spencer is with the Department of Geological Sciences at the University of Maine in Orono.
Bus. Phone-- 207-581-2142.
E-mail-- dspencer@maine.maine.edu

Christopher Thiry is the Map Librarian for the Colorado School of Mines Library. Bus.Ph: 303-273-3697 Fax: 303-273-3199

Mailing address:
Colorado School of Mines Library
PO Box 4029
Golden, CO 80401-0029
E-mail: cathy@mines.edu

Bas van der Hoek is a publisher at Elsevier Sciences B.V., Amsterdam, the Netherlands.

Mailing address:
Elsevier Sciences B.V.
1000 BX Amsterdam
The Netherlands
E-mail: b.hoek@elsevier.nl

INTERNET SOURCES

Geosciences Indexes, etc., Web Page

The following web page is now available: Geosciences Indexes, Abstracts, Bibliographies, and Table of Contents Services: <http://info.lib.uh.edu/indexes/geosci.htm>

This page contains links to Internet-based tools for finding geosciences-related journal articles, preprints, research papers, proceedings, and similar materials. It was created and will be maintained by Nancy Buchanan and Jennifer Atkinson of the University of Houston Libraries. A list of all the pages in this series is available at:

<http://info.lib.uh.edu/indexes/indexes.htm>.

If you have any suggestions for additions to this page, please let me know.

Nancy Buchanan, Coordinator of Electronic Resources
University of Houston Libraries
University of Houston
Houston, TX 77204-2091
phone: (713) 743-9763 fax: (713) 743-9778
Nbuchanan@uh.edu

GEOSCIENCE JOURNAL PRICES

compiled by Michael M. Noga
Collection Development Issues Committee

This is an update of the list that was distributed at the Annual Meeting in Salt Lake City. Six titles were added, and some prices were corrected.

Prices come from invoices, price lists from publishers, serial vendor catalogs, and journal issues. Prices vary depending on the subscription source and the date of payment.

Journals were included in this list if they fit two criteria: 1) the subject fit broadly in the geosciences; and 2) there was sufficient price information. The latest title of each journal was used.

Total number of titles = 172

Total number used to calculate price changes = 171

Average price change

1995/1996 21.5%

1996/1997 9.7%

1997/1998 6.5%

Lee Walking can be contacted at: Phone: 360-748-0796

Mailing address:

445 Brockway Road, #1
Chehalis, WA 98532

Elizabeth Wallace is the Earth Sciences Librarian for Syracuse University. Bus. Phone: 315-443-2160

Fax: 315-443-5549

Mailing address:

Syracuse University Libraries
Syracuse, NY 13244-2010
E-mail: eawallac@library.syr.edu

Fred Yuengling is Physical Sciences & Mathematics Bibliographer at the University of California at Santa Cruz. Ph: 408-459-3583

Fax: 408-459-2797

Mailing address:

Science Library
University of California at Santa Cruz
Santa Cruz, CA 95064
E-mail: feyuengl@cats.ucsc.edu

Address Corrections for the Membership Directory:

Mary Frances Lembo's business phone number is actually 504-280-7280.

Thomas Plawman has moved to Wyoming and is now:

Science/Geology Reference Librarian
University of Wyoming Libraries
PO Box 3262
Laramie WY 82071-3262
Ph: 307-766-2509 Fax: 307-766-6757
E-mail: tplawman@uwyo.edu

Clement Mwiya *Siyumbwa* is the correct spelling of

Mr. Siyumbwa's last name. E-mail: Geosurv@global.bw

Nancy Sprague is now at the University of Colorado at

Colorado Springs. Her new address is:
1023 N. Caster Avenue
Colorado Springs, CO 80903
E-mail: nsprague@mail.uccs.edu

Marlyn Stark's new business phone number is 303-973-7202

PRICES IN U.S. DOLLARS

	1992	1993	1994	1995	1996	1997	1998

AAPG Bulletin.....	135	135	135	135	140	140	140
AAPG Explorer.....	30	30	45	50	50	50	50
American Journal of Science...	90	90	115	125	135	148	150
American Mineralogist.....	200	225	250	270	295	320	350
Annales Geophysicae.....	531	721	597	675	943	1124	1124
Antarctic Journal of the U S	13	13	24	24	24	23	23
Antarctic Science.....	151	156	164	178	236	264	322
Applied Geochemistry.....	232	300	300	329	385	430	499
Arctic and Alpine Research..	70	70	75	75	80	90	95
Atlantic Geology.....	38	38	38	43	43	48	48
Australian J. of Earth Sci...	225	290	325	349	385	513	560
Basin Research.....	168	209	190	208	269	340	539
Biogeochemistry.....	444	598	542	628	830	874	874
Boreas.....	140	142	127	143	172	179	189
Bulletin of Volcanology.....	306	470	477	508	558	596	596
California Geology.....	8	10	10	10	10	10	10
Canadian J. Earth Sci..	326	335	365	398	455	510	510
Canadian Mineralogist.....	150	195	250	280	295	310	310
Carbonates and Evaporites....	50	50	50	52	54	57	61
Catena.....	299	332	363	551	704	787	810
Chemical Geology.....	1164	1447	1626	1814	2261	2444	2457
Chinese J. of Geophysics.....	320	350	375	405	455	500	560
CIM Bulletin.....	125	125	135	150	150	150	150
Clay Minerals.....	150	150	150	155	155	160	160
Clays and Clay Minerals.....	125	135	140	145	165	185	185
Climate Dynamics.....	239	374	922	572	1053	1124	1124
Computers & Geosciences...	933	938	930	1006	1177	1355	1443
Continental Shelf Research..	535	713	760	842	1010	1162	1312
Contr. to Mineral. & Petrol	1647	2043	2174	2236	2796	2707	2707
Deep Sea Res. Pt. I & II.....	1301	1644	1565	1759	2099	2431	2775
Earth and Planetary Sci Ltrs.	984	1352	1456	1743	2168	2333	2471
Earth Moon and Planets.....	682	925	880	984	1166	1228	1170
Earth Science Reviews.....	350	430	439	454	579	648	819
Earth Sciences History.....	30	50	55	50	50	50	50
Earth Sur. Proc. & Landforms	425	565	635	725	950	1175	1355
Eclogae Geologicae Helvet.	321	379	374	373	467	505	509
Economic Geology.....	105	115	132	132	132	132	132
Engineering Geology.....	506	608	650	696	592	704	1000
Environmental Geology.....	219	337	344	359	404	597	615
Eos.....	190	205	225	230	295	315	340
Episodes.....	24	24	24	24	24	24	24
Evolution.....	150	160	160	160	160	160	170
First Break.....	374	410	399	442	505	505	526
Fluid Inclusion Research.....	32	32	32	32	32	32	32
Geoarchaeology.....	195	225	260	294	342	568	656
Geobios.....	170	170	170	170	170	170	170
Geochim. et Cosmo.Acta.....	670	775	895	1000	1150	1295	1410
Geoderma.....	575	783	1003	1172	1482	1667	1707
Geoforum.....	404	398	410	440	519	576	630
Geological Journal.....	235	265	295	345	395	475	545
Geological Magazine.....	220	249	263	282	298	312	324
Geological Society of Jour.	487	441	524	524	571	617	641
Geologie en Mijnbouw.....	124	168	153	187	247	250	252
Geologische Rundschau.....	189	337	317	331	398	441	460

Geologists Assoc. Proceed..	140	129	134	140	149	161	169	
Geology.....	140	150	150	170	170	350	350	
Geology Today.....	165	195	172	190	217	234	271	
Geomagnetism and Aeron.	490	545	545	545	555	623 555 623 555 675 745	368	
Geo-Marine Letters.....	157	202	202	235	318	350	368	
Geomorphology.....	238	423	594	639	814	1185	1195	
Geophysical J. International.	845	970	872	972	1037	1043	1229	
Geophysical Prospecting.....	335	362	369	406	464	501	529	
Geophysical Res. Letters.....	480	498	590	590	780	826	879	
Geophysics.....	210	265	265	250	250	250	250	
Geoscientist.....	63	67	70	70	76	82	95	
Geotectonics.....	395	395	395	395	395	435	487	528 530 580
Geothermics.....	356	409	425	500	573	628	734	
Geotimes.....	25	35	35	35	37	37	37	
Global Biogeochem. Cycles.	135	148	185	185	270	275	295	
Global Environm. Change.....	n/a	185	208	246	303	368	408	
Ground Water.....	63	90	90	100	150	165	200	
GroundWater Monit. & Rem.	19	30	30	35	53	58	70	
GSA Bulletin.....	170	185	185	205	205	350	350	
Holocene.....	166	225	275	316	349	384	537	
Hydrological Processes.....	225	250	345	495	725	995	1295	
Hydrological Sciences J.	160	160	160	160	170	180	180	
Int J Rock Mech. & Min. Sci	953	1197	845	976	1249	1419	1616	
International Geology Rev.	748	789	849	889	949	985	985	
Int Journal of Coal Geol.	567	617	466	521	696	802	1138	
Izvestiya, Atmos. & Ocean. Phy	550	550	550	550	550	605	678	735 810
Izvestiya, Phys. of Solid Eart	565	565	565	580	580	638	714	715 850
Journal of African Earth Sci.	607	595	676	723	875	984	1172	
Journal of Applied Geophys	186	212	417	447	585	704	690	
Journal of Asian Earth Sci	392	513	490	485	859	663	721	
J. Atmos. & Solar-Terr. Phys	1144	1279	1245	1319	1654	2014	2190	
Journal of Atmos. Chem.	301	408	369	498	589	632	647	
Journal of Coastal Research..	125	125	125	125	135	135	145	
Journal of Foraminiferal Res.	80	80	80	80	80	80	80	
Journal of Geochem. Explor.	718	701	633	742	988	1139	968	
Journal of Geodesy.....	245	332	357	409	456	540	571	
Journal of Geodynamics.....	408	447	455	n/a	629	741	914	
Journal of Geology.....	63	78	78	78	86	86	86	
Journal of Geophysical Res.	2555	2800	3065	3510	3970	4310	4598	
Journal of Geoscience Educ.	33	33	33	33	33	33	33	55
Journal of Hydrology.....	1694	2349	2383	2495	3147	3475	3621	
Journal of Marine Research.	60	80	90	90	100	110	110	
Journal of Metamor. Geol.	320	395	435	475	495	530	560	
Journal of Micropaleontol.	100	100	100	100	108	117	123	
Journal of Molluscan Studies	150	160	165	170	190	205	220	
Journal of Paleontology.....	99	99	99	99	99	99	99	
Journal of Petroleum Geol.	240	264	280	294	294	304	304	
Journal of Petrology.....	292	273	295	350	380	525	595	
Journal of Quaternary Sci	235	255	295	345	495	575	665	
J. of South Amer. Earth Sci.	224	266	255	254	414	467	508	
Journal of Structural Geol.	432	618	640	708	835	936	1018	
Journal of the Atmos. Sci.	320	350	350	355	390	455	475	
J. of Vertebrate Paleont.	85	85	85	85	125	195	195	
J. of Volcan. & Geotherm Re	636	965	1139	1178	1500	1635	1638	
JPT: Journal of Petrol. Tech.	30	45	45	45	45	45	45	
Leading Edge.....	65	70	70	70	70	70	70	
Lethaia.....	140	142	129	143	171	179	180	
Limnology and Oceanograph	160	160	160	175	175	175	175	
Lithos.....	209	339	529	551	723	796	802	
Marine Chemistry.....	657	855	867	919	1183	1348	1368	
Marine Geology.....	984	1352	1385	1481	2049	2316	2345	
Marine Geophysical Res.	226	308	385	461	585	637	605	

Marine Micropaleontology...	334	434	444	473	585	889	879
Marine Pollution Bulletin.....	326	447	430	462	589	656	783
Mathematical Geology.....	395	425	455	462	525	555	595
Meteoritics & Planetary Sci	110	150	210	220	230	265	330
Mineralium Deposita.....	242	419	455	462	652	702	706
Mineralogical Magazine.....	218	202	215	225	225	250	280 270
Mineralogical Record.....	55	60	60	65	75	75	75
Mineralogy and Petrology.....	416	503	564	779	732	745	700
Mountain Geologist.....	34	34	34	34	34	34	34
Natural Hazards.....	207	282	288	329	413	428	431
Nature.....	350	428	425	425	495	495	595
Nautilus.....	40	40	40	45	45	45	45
New Zeal. J. Geol & Geophy	190	190	190	190	200	200	210
Norsk Geologisk Tidsskrift.	122	133	125	135	155	160	170
Northeastern Geol. & Env. Sci	38	40	52	52	58	59	59
Oceanology.....	490	490	490	490	490	539	603 684 720
Oil and Gas Journal.....	105	120	127	135	145	145	145
Ore Geology Reviews.....	236	310	306	342	445	519	529
Organic Geochemistry.....	1048	618	700	1185	1646	1807	1965
Palaeogeog, Palaeoclim, Palaeoecol..	1251	1587	1539	1809	2470	2528	2586
Palaios.....	95	115	120	128	147	165	165
Paleobiology.....	65	65	65	65	65	65	65
Paleobios.....	8	8	8	8	10	10	10
Paleoceanography.....	180	195	215	270	275	280	299
Petroleum Geoscience.....	n/a	n/a	n/a	171	180	195	217
Physical Geography.....	164	209	229	243	264	279	289
Phys and Chem. of Minerals..	768	832	814	883	1127	1173	1173
Phys of the Earth & Planet. Int	1028	1274	1317	1370	1683	1826	1845
Planetary and Space Science	859	1416	1355	1431	1718	1926	2096
Planetary Report.....	25	25	25	25	25	25	25
Precambrian Research.....	759	1038	1219	1244	1592	1741	1759
Pure and Applied Geophys	1038	1163	1296	1536	2571	1844	1738
Quarterly J. of Engr. Geo	223	234	245	245	281	304	307
Quaternary International.....	227	262	250	373	438	563	614
Quaternary Science Reviews	472	599	575	619	724	798	1014
Remote Sensing of Environ.	598	796	908	1159	1236	1398	1564
Rev. of Palaeobot. & Palynol	715	898	908	973	1457	1574	1552
Reviews of Geophysics.....	220	220	220	250	250	250	265
Rock Mech. & Rock Engr.	189	215	225	237	222	228	228
Russian Geol & Geophys.....	830	875	920	980	1065	1155	1245
Science.....	195	205	215	228	250	260	260
Scientific Drilling.....	---	171	136	---	180	---	139
Scottish Journal of Geology.	138	102	114	119	126	136	142
Sedimentary Geology.....	819	1004	1187	1348	1686	1944	2115
Sedimentology.....	385	474	434	479	546	588	729
Seismological Res. Letters..	20	20	20	85	85	85	85
Soil Science.....	116	128	140	149	164	179	195
Soil Sci. Soc. of Amer. J.	85	92	100	108	117	137	137
Surveys in Geophysics.....	236	296	296	352	433	447	426
Tectonics.....	280	308	330	380	385	392	409
Tectonophysics.....	1982	2444	2429	2505	3090	3267	3362
Tellus.....	281	306	289	361	392	335	273
Terra Nova.....	295	338	314	358	409	433	502
Water Research.....	1145	1493	1615	1841	2268	2516	2918
Water Resources Research	505	530	660	675	675	680	720
Yorkshire Geol. Soc. Proceed	67	77	94	92	96	109	114
Zeit. der Deutsch Geol Gesells	65	67	67	67	67	67	67

-- delayed publication, no payment

n/a not applicable

Mary Frances Lembo, GIS Newsletter Editor
University of New Orleans
Earl K. Long Library
New Orleans, LA 70148

Non-Profit Org.
U.S. Postage
PAID
New Orleans, LA
Permit No. 759

Michael Noga
Massachusetts Institute of Technology
Science Library
14S-134
Cambridge MA
02139-4307 USA