GEOSCIENCE INFORMATION SOCIETY

PRINTED PAST, DIGITAL FUTURE:

We Hold the Key

Proceedings ● Volume 42 ● 2011

Proceedings of the 46th Meeting
of the Geoscience Information Society

October 8-12, 2011
Minneapolis, Minnesota USA

PRINTED PAST, DIGITAL FUTURE:
We Hold the Key

Edited by
Rusty Kimball

Proceedings
Volume 42
2011
Geoscience Information Society

GEOSCIENCE
INFORMATION
SOCIETY

ISBN: XXX-0-XXXXXX-XX-X

ISSN: 0072-1409

For information about copies of this proceedings volume or earlier issues, contact:

Publications Manager
Geoscience Information Society
c/o American Geological Institute
4220 King Street
Alexandria VA 22302-1502 USA

TABLE OF CONTENTS

PREFACE

PREFACE

The Geoscience Information Society (GSIS) was established in 1965 as an independent, nonprofit professional society. Members include librarians, information specialists, publishers and scientists concerned with all aspects of geosciences information. Members are based in the United States, Canada, Australia, Sweden, Taiwan, and the United Kingdom.

GSIS is a member society of the American Geological Institute and is an associated society of the Geological Society of America (GSA). The GSIS Annual Meeting is held in conjunction with the annual GSA meeting, and the papers, posters, and forums presented are a part of the GSA program.

Oral presentations of the papers provided in these proceedings were given at the 2011 Annual Meeting of the Geological Society of America held in Minneapolis, Minnesota October 9-12, 2011. The papers are arranged in the order in which they were presented. Where the entire paper was not available due to publishing conflicts, the abstract is provided with the permission of GSA. Posters were presented all day with authors available for discussion during a two-hour session.

The proceedings are volume is divided into three parts:

1. Oral papers presented at the GSA Technical Session No. 223: “Printed Past, Digital Future—We Hold the Key”

2. Posters presented at the joint GeoInformatics/GSIS Session No. 263: “GeoInformatics in Action”

3. Schedules, listings, and reports of the 2011 GSIS program sessions

Thanks to all of the paper and poster presenters and to the session conveners/proceeding editors who have preceded me, especially Jody Bales Foote and Lisa Johnston who have given me such helpful input in preparing this volume.

Rusty Kimball
GSIS Technical Sessions Convener 2011

PART 1: GSA Topical Session 223

Printed Past, Digital Future: We Hold the Key

Technical Session Convener

Rusty Kimball
October 12, 2011
8:00 a.m. - 12:00 p.m.

NEW MAP-BASED SEARCH TOOLS AND OTHER FEATURES DEBUTING ON GEOSCIENCEWORLD

MARLEY, Lauren
GeoScienceWorld
4220 King St, Alexandria, VA 22302
marley@geoscienceworld.org

Abstract - GeoScienceWorld is a non-profit organization that hosts 39 peer-reviewed geoscience journals which are fully integrated with GeoRef, the premier abstracting and indexing database in the field of earth sciences.

Part of the vision for GeoScienceWorld is to benefit geoscientists and their societies by enhancing and expediting literature searches for research and information. To that end, we will be providing a sneak peek at GeoScienceWorld's new branding and features debuting this November as part of GeoScienceWorld's migration to HighWire Press's H20 platform. This will include a new and interactive map-based means of retrieving GeoRef's research data. In addition to locating content by latitude and longitudinal coordinates, users can highlight areas on Google Maps™ for dynamic retrieval (sample shown here: http://0ape.com/for_ronl/index_v4.html). Join our session for a demonstration and an exploratory discussion on ideas for future mobile and interactive map-based mobile capabilities.

GREY LITERATURE IN A DIGITAL AGE: WHAT AND WHERE IS IT?

PEREIRA, Monica
Reference
University of Georgia Libraries
Science Reference - Science Library
University of Georgia
Athens, GA 30602
pokey@uga.edu

and

PROSSER, Cynthia L.
University of Georgia Libraries
University of Georgia
Science Collections
Science Library
University of Georgia, Athens, GA 30602
cprosser@uga.edu

Abstract – The essential nature of grey literature has changed very little over the years. One notable difference is that grey literature now also inhabits the Internet and the World Wide Web (Web). While the online environment provides multiple access points, it also provides more places for grey literature to be lost. The importance of grey literature in the geological sciences cannot be denied and yet grey literature still lives its shadowy existence. It is not indexed systematically or comprehensively, may not be digitized, and consequently receives minimal exposure to researchers. Grey literature continues to be proliferated locally, nationally and internationally by governments, researchers, and commercial entities. In spite of understanding the importance of grey literature, collection and preservation of these print and digital documents remains a sketchy process. The value grey of literature needs exposure because the information it contains is unique, contemporaneous, and therefore vital to researchers and interested laypersons.

INTRODUCTION

The International Conference on Grey Literature defined grey literature as:

"… information produced on all levels of government, academia, business, and industry in electronic and print formats not controlled by commercial publishing, i.e. where publishing is not the primary activity of the producing body." (ICGL Luxembourg, 1997; Expanded ICGL New York, 2004)

Grey literature has been around for as long as methods for recording activities and reporting on events have existed. Its importance is predicated on the value of its contents to researchers. Sources collected in archives may include unique contents, e.g. diaries, letters, birth and death registries, notebooks, maps, drawings and other formats. Simply put, if a resource is produced with little or no intention of its being published and commercially distributed, it will be considered grey literature.

EXAMPLES OF GREY LITERATURE

Grey literature shares similarities with formal, or white, literature. Both may describe contemporaneous research endeavors; both get cited in white and grey literature, although white literature is more likely to be read widely. The same groups that produce white literature also produce grey literature. However, grey literature tends to be ephemeral, because it may be generated as a precursor, or support, to formal literature. The philosophy of the agency or research group is more likely to influence the content and presentation of grey literature than it is of formal literature. It plays a passing role, usually as a snapshot in time of the status of an event or project. In addition, grey literature outputs are agnostic in terms of format. That is, it does not matter if it is produced in print, electronic, or micro media, as long as the contents can be shared.

Some examples of grey literature include:

- The working documents of groups, or the products of conferences, where being present is the only way to be privy to potentially useful information;
- Publications from federal, state and local agencies, official and unofficial historical societies and interest groups, parks, wildlife preserves, and other entities that compile information on their areas of specialty;
- Log books, personal journals, and lab notebooks used to collect field and experimental data until it can be consolidated and reported on via formal literature outlets;
- Legal documents that authorize drilling, mineral and water rights, property boundaries, well permits, and other contractual agreements;
- Audiovisual materials;
- Field trip guidebooks;
- Theses and dissertations;
- Personal communications, which may include letters, electronic mail, news clippings and notices, doodles, notes and scribbling.

The value of conference papers and proceedings cannot be underestimated. It is at professional conferences, meetings, symposia, and workshops that innovative ideas are aired, contemporary research is assembled and disseminated. While the contents of these events may be published, the circulation of proceedings tends to be limited to attendees, and a few libraries. In addition, it is difficult to keep up with the proliferation of meetings and their outputs.

Access to the research output of federal, state, and local agencies, historical societies, parks, wildlife preserves, and other interest groups, is generally easier to access through web sites or site visits; on the other hand, it can also be problematic. This is especially true if information has been updated. An agency or group may discard prior versions of the literature in favor of promoting the current publication, whether it is a factsheet, brochure, pamphlet, or guidebook. If scholarly research has used information for an earlier iteration, that information becomes difficult to track down.

Even more obscure are legal documents that provide contractual details of transactions, agreements or arrangements for the use of land and resources. More recently, such documents may be filed with the local jurisdictional authorities. However, this organized approach can only be assumed for more recent legal documents. Those that were created as private arrangements, and involved only the parties to the agreement -are rare finds.

Of the items listed, audiovisual formats are a more recent documentation method. Their contents may be overlooked unless research questions are framed specifically to elicit the information they have recorded.

For example, video footage or photographic evidence of natural phenomena may be useful in determining and describing processes, sequences of events, or outcomes. Audiovisual materials are highly unique, and their contents can be micro analyzed for visual or aural clues that might otherwise escape attention.

Deeper understanding can be gained from the recorded sounds of an oil well gusher, icebergs calving, earthquakes, and sounds emanating from space. Film footage of volcanic eruptions can help build an appreciation for the event itself as well as giving insight into similar events. Video recordings can preserve footage of events and phenomena for later study. Inaccessible spaces thus can become accessible. Furthermore, technological advances may allow for more precise analysis of the same footage, depending on the original resolution.

Field trip guidebooks may be overlooked because of their ephemeral nature. While similar trips may be presented over time, more often field trips cover different routes depending on current interests. Aspects and features covered by earlier trips may be omitted, as new ones are added. Prefaces and supplementary readings can encapsulate contemporary thinking on the subject of interest. Oftentimes, it is only the field trip participants who receive a copy of the guidebook. Field trip guidebooks can be indexed in the Geologic Guidebooks of North America Database, GeoRef, and WorldCat. However, a large number of field trip guidebooks never make it into these three databases. The reasons for omission are numerous and have been detailed elsewhere (Joseph, 2009). The crucial point is that field trip guidebooks, as with any grey literature, have to be identified and made known in order to be included in databases.

Theses and dissertations are examples of grey literature that display a comprehensive collection of all the facets of a particular subject as it was known at the time. Chronologically, dissertations and theses on a similar topic will illustrate a progression of thinking on that topic. Chapters in dissertations and theses are often rewritten and published as books or articles, making this format a mere way station towards a more glorified goal. In that process, valuable information may be edited out. As a result, theses and dissertations are overshadowed by the gravitas of formal literature. Material included in the original thesis or dissertation, such as prefaces, forwards, acknowledgements, or bibliographies, can shed light on funding sources, political frameworks, or academic or corporate culture. These facets, although fleeting and yet necessary, can accrue in importance.

Yet another category of grey literature includes personal communications in the form of letters, electronic mail, news clippings and notices, doodles, notes, and scribbling. Their importance does not depend solely on elucidating the rationales behind formal and grey literature. They can also shed light on which angles of research pursuit were neglected or rejected, and the reasons for those decisions. Personal communications, by their very nature can be useful in illuminating the thought processes behind the research outputs. Access to these materials may be nigh impossible because their authors are extremely prolific, and may be discarded by the authors themselves or others in attempts to clean out office spaces.

LOCATING GREY LITERATURE

Grey literature can be difficult to discover because it may never be indexed in databases or cataloged. Also, the materials may be rare or proprietary, and therefore, unevenly disseminated. Academic and public libraries can be valuable repositories of grey literature. For example, public libraries may have documentation that marks changes in their communities over time, and these changes are so local as to be invisible at the county or state level.

Grey literature may be found in a variety of locations ranging from personal collections to collections of materials in institutional, company, or organization archives. In some instances, the term archive may be generous as the contents are not organized, collated, or even itemized. Often created for ad hoc purposes, grey literature may not be preserved for subsequent or general use. For example, research into one's family members may be based on sources such as family papers, local community records and registries, and records of religious institutions. Yet, some or all of these may remain un-digitized.

Finding grey literature that focuses on localized areas can highlight geographical, geological, or historical importance of smaller areas. While these areas may seem to be limited in scope, they can often affect larger areas. For example, drawings or maps indicating the locations of local wells, landmarks, abandoned mines, historic population centers, and features. The benefit of the area being small is that the data can be highly granular, thus increasing its value to the researcher.

Accessing grey literature can include difficulty in finding and preserving it before it is irretrievably lost. In addition, it may be in a format that requires more technology than the average researcher has, such as microreaders and printers. It is one consideration to cite a work and quite another to gain permission to use a portion of it in one's own writing. Once found, locating copyright information for grey literature may present problems, and if the rights holders are found, receiving permission to use the material may present further challenges. Where rights holders cannot be identified, the grey literature joins the oeuvre of orphan works.

Occasionally, grey literature may be located by using commercial databases. Also, it can be listed in specialized organization or government databases. Most often it is discovered by paying close attention to the citations already in hand and following them assiduously -or by being reaped from interactions with one's instructors, other subject-matter experts, research colleagues, and even serendipitous meetings among acquaintances at a conference. Increasingly, Web browsers are used to find grey literature. Obviously this method only works if the materials are digitized and listed in catalogs or other web sites. However, it is impossible to know what is missing from this medium; one cannot itemize what is absent. In addition, the contents of the Deep Web often remain undiscovered because web browsers cannot mine it effectively, efficiently, or sometimes not at all.

Acquiring grey literature may be simple if it is in an academic or public library. Organizational libraries may present more complications, depending on whether the organization is organized enough to locate its own literature and materials, and whether it is willing to share them. Institutional repositories, whether academic or agency-affiliated, are another good place to forage for grey literature. Then, there is always the wild hope that relevant grey literature somehow is floating around on the Internet or the Web.

AWARENESS OF VALUE OF GREY LITERATURE

There is a growing awareness among dedicated researchers, across disciplinary spectra, of the need to collect and preserve grey literature. The urgency is highest when grey literature is in danger of being scattered or destroyed. As a result, many institutions of higher learning are investing in institutional repositories. Archiving institutional documents and building special collections allow for the preservation of internal scholarship and permit a broader scope of collecting and ordering materials not necessarily directly related to the institution. Naturally, encouraging awareness of the potential value of grey literature among all levels of researchers would enhance the access to these resources.

Placing grey literature in an accessible institutional collection, digitizing the material, and making it available electronically, are baseline mechanisms for sharing grey literature. Additional mechanisms would include providing metadata and offering duplication services. Reproductions in a tangible format can preserve the quality of the original materials so degradation of the originals is postponed as long as is possible. Some materials, e.g. slides, parchment, etc. especially benefit from institutionally-operated duplication processes.

NEWER FORMS OF GREY LITERATURE

The realm of grey literature now encompasses much of the information found on the Web. Blogs, written by professionals or subject-specialists, wikis (e.g. on the use of specialized equipment), video blogs, video journals (e.g. demonstrations of processes), web sites focused on sharing information and feedback on a variety of academic pursuits, are joining the universe of grey literature. Archiving digital-only grey literature is not generally considered an important part of publishing on the Web. Even if archiving does occur on the personal level, that will not help those who may have used the information found in these several venues, and perhaps shared the information with other researchers.

CONCLUSIONS

Due to the circumstances under which grey literature is created, it may be neglected after its initial use. In fact, the very nature of the initial use, e.g. field notebooks, maps or photographs created for field use, etc. may dictate whether grey literature is thought to be worthy of archiving, preserving, disseminating, cataloging, or indexing. Seeing value beyond the initial use is a relatively new concept, but one that needs to be developed among researchers, geoscience librarians, and institutions. As mentioned earlier, the content of any grey literature may be reexamined in light of contemporary research needs and improved technological capabilities. Once identified and collected, grey literature should be organized in the same manner as formal literature by being cataloged, indexed, filed (acid-free), and so on. In addition, metadata elements must be articulated.

Responsibility for identifying grey literature ultimately depends on the efforts of a corps of experienced researchers such as geoscience librarians, geoscientists, and other information professionals. This body of experts has developed a familiarity with the subject material as well as a host of related materials. It is reasonable to expect that this corps will be far more efficient and effective in scouting out grey literature than any institutional sorties or campaigns of discovery. The diversity of interests and research pursuits embodied in this corps already fuels and energizes efforts to track down grey literature through listservs and other collegial interactions. The tenacity evidenced in identifying and locating fugitive literature is a core strength. As partners, this corps relies on academic and corporate institutions to provide the infrastructure and financing for preserving, digitizing, and archiving grey literature. For this outcome to be attained, institutions must be made aware of the value of grey literature for its own sake, and not merely for purposes of financial return on the investment. Through these combined efforts we can determine the eventual disposition of grey literature in a digital age.

REFERENCES

Joseph, L. E. (2009, October 18-21). Geologic field trip guidebooks: Progress on a project to identify indexing gaps. Paper presented at the 44th Meeting of the Geoscience Information Society, Portland, OR.

ANALYZING GeoBase: A COMPARISON WITH GENERAL AND SUBJECT DATABASES

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

Abstract - Many bibliographic indexes are available for geoscience research, including general indexes such as *Academic Search* and *InfoTrac*; science databases, such as *Web of Science* and *Scopus*; and subject specific databases, such as *GeoRef* and *Biological Abstracts*. As library budgets are reduced by inflation and other cuts, libraries are increasingly looking at all possible savings, including reducing database subscriptions.

GeoBase, a primary database for geography which is also useful for research in the geosciences, was compared with a number of subject databases, including *GeoRef*, *Biological Abstracts*, *Zoological Abstracts*, *Science Citation Index*, *PAIS*, *Sociological Abstracts*, *International Political Science Abstracts*, *America History & Life*, *Historical Abstracts*, general indexes (*Academic Search* and *InfoTrac*), and others. A comparison of these databases reveals that each index contains unique content and search capabilities. Examining the coverage of these databases to identify the number and nature of unique and duplicate titles and assessing the needs of the local user population allows librarians and their users to make informed decisions regarding possible database cancellations. With the results of these analyses, librarians will be able to hold informed discussions with their users regarding potential database cancellations and direct them to other potential sources of information.

IMPROVING ACCESS TO GEOSCIENCE RESOURCES VIA CONTENT ENHANCEMENT

Linda R. Musser
Fletcher L. Byron Earth and Mineral Sciences Library
Pennsylvania State University
105 Deike Building
University Park PA 16802
Lrm4@psu.edu

Abstract - Content enhancement is the process of adding data elements such as table of contents or summaries to core metadata in order to improve search retrieval and/or the item description. Research shows that content enrichment increases the number of unique terms per record, significantly improves retrieval, and increases the likelihood of use. One of the key findings of the 2009 OCLC report "Online Catalogs: What Users and Librarians Want" was that users rely on and expect enhanced content including summaries/abstracts and tables of contents. Many library catalog records now routinely include such enhanced elements, and several commercial services exist to provide enhanced content on demand. There are few good sources for enriched content for older resources, however, leading individual libraries to undertake projects to enhance records manually. Given the importance of the older literature in the geosciences, such efforts are well worth exploring.

WHAT IS CONTENT ENHANCEMENT?

The 2009 OCLC report "Online Catalogs: What Users and Librarians Want" investigated the data quality expectations of users and librarians and identified the data elements deemed most important to these groups. The report also summarized the enhancements users would like to see made in online catalogs to assist them in consistently identifying appropriate materials. One of the key findings was that users "rely on and expect enhanced content including summaries/abstracts and tables of contents" (p.v).

Content enhancement, also called content enrichment, is the inclusion of additional metadata elements beyond the minimum or usual in order to improve search retrieval and/or item description. Some of the more common types of content enhancement are the addition of tables of contents, keywords, and/or summaries/abstracts. Other examples include: book jacket information, cover art/images; notes; incipits or sample text; and reviews. For many years, content enhancement was too time-consuming to routinely attempt. However, the last decade has seen its use greatly increase, as illustrated in Figure 1 and Table 1. Library catalog records now routinely include enhanced elements, and several commercial services exist to provide enhanced content on demand.

WHY ENHANCE RECORDS?

There are several reasons why content enhancement is worthwhile. Enhancement as a means to increase circulation of materials is one. The literature on content enhancement is fairly robust (Dykas and Stevens, 2011; Blackwell, 2005, appendix G) with a variety of studies investigating the effect of content enhancement (typically tables of contents) on circulation (Tosaka and Weng, 2011). Studies generally indicate that circulation of materials is increased by content enhancement, with the amount varying by age of item and discipline. Results range from a four-fold increase (Madarash-Hill and Hill, 2004), an increase of 45%

(Morris, 2001), a 20% increase (Faiks et al., 2007), and a 25%-50% increase for materials over five years old (Tosaka and Weng, 2011). Circulation increases following content enhancement may be due in part to its impact on discoverability. The average table of contents adds five times the number of unique words as the title alone (Markey and Calhoun, 1987) but in individual instances the number of unique terms added can go much higher (see Figures 2 and 3).

Enhancement as a means of assisting users in evaluating materials prior to retrieval is another common justification. In addition to improving retrieval of relevant records, inclusion of enhanced elements assists users in evaluating the content for relevancy. This is particularly important as users become more remote from physical collections, either due to libraries storing materials offsite or the dispersion of users from physical library facilities.

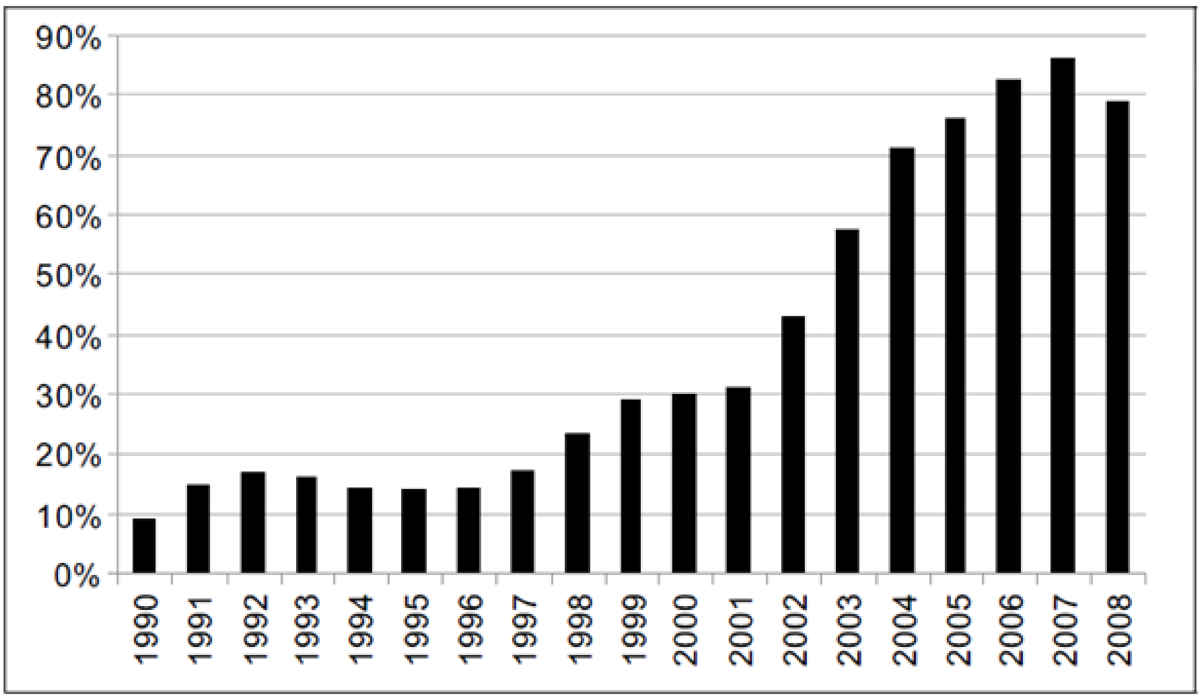


Figure 1. Percentages of content-enriched records, 1990-2008 (after Tosaka and Weng, 2011).

TABLE 1 Percentages of enhanced records (after Tosaka and Weng, 2011).

Publication Dates	% of Enhanced Records
1990–94	14.3%
1995–99	19.3%
2000–04	45.8%
2005–08	80.9%

Doing content enhancement

A recent test of two content enhancement services (BackStage and Marcive) by the Pennsylvania State University Libraries examined approximately 5000 newly added catalog records lacking tables of contents or summaries and found that these services could provide enhanced elements (tables of contents, summaries, or fiction/biography fields) for 40-60 percent of the records, those typically being the more recent publications (Pennsylvania State University Libraries, 2009). The cost of such services vary somewhat but run on average around a $1 per enhanced record. Depending on the local budget situation, such a service may be worth the investment, given the impact it can have on circulation.

If use of a commercial service is not feasible, manual addition of enhanced elements is an option. Librarians at the University of Missouri tested manual transcription of tables of contents from CIP data at the Library of Congress and found that it required from 3-10 minutes per record (Dykes and Stevens, 2011). (It should be noted that publisher-supplied CIP data does not always match the contents of the actual item.) Manual transcription directly from an item in hand is another option and takes a comparable amount of time, although guidelines for handling various types of tables of contents need to be established. Tables of contents of solo-authored works are quite different from tables of contents from composite works such as conference proceeding and other jointly-authored works, and may warrant different handling (see examples in Figures 4 through 9). Additionally, decisions need to be made about who is allowed to edit the local catalog records and whether the enhancements will remain local only, or be added to shared catalogs such as WorldCat.

Finally, before beginning a content enhancement project, it is worth considering whether emerging technologies will make content enhancement moot. Will scanning projects by government agencies such as the U.S. Geological Survey or organizations such as Google, which seeks to scan and make the full text of millions of books searchable, and the HathiTrust, whose mission is to dramatically improve access to materials in libraries, obviate the need for enhanced metadata to improve findability? Capabilities such as Amazon.com's "Look Inside" feature now allow users to scan contents before obtaining the item, so is having a table of contents in a catalog record still necessary for evaluating relevancy? Finally, if web-scale discovery services such as WorldCat Local and the Serial Solutions' Summon service can incorporate enhanced metadata from publishers and abstracting & indexing services into a seamless whole, is the addition of enhancements to catalog records a reasonable use of limited library staff time or funding?

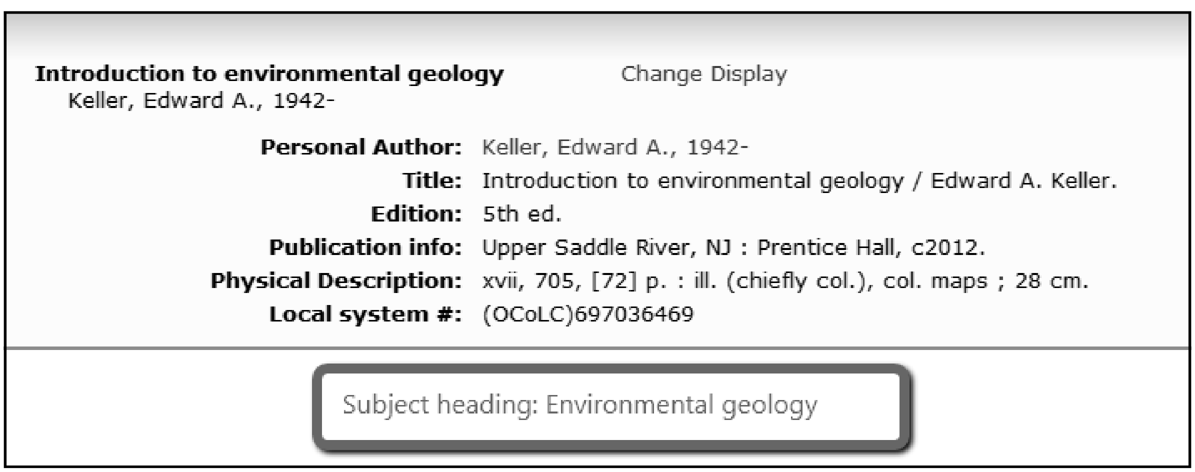


Figure 2. Basic monographic record – 3 unique keywords in title and subject heading

Contents: Machine generated contents note: ch. 1 Philosophy and Fundamental Concepts -- Case History: Caribbean island of Hispaniola: Story of History, People, Environmental Damage, and Earthquake -- 1.1.Introduction to Environmental Geology -- A Closer Look: Earth's Place in Space -- 1.2.Fundamental Concepts of Environmental Geology -- Concept One: Human Population Growth -- Concept Two: Sustainability -- Concept Three: Earth as a System -- Case History: The Aral Sea: The Death of a Sea -- A Closer Look: The Gala Hypothesis -- Concept Four: Hazardous Earth Processes -- Concept Five: Scientific Knowledge and Values -- A Closer Look: Knowledge, Imagination, and Critical Thinking -- A Closer Look: Easter Island: A Complex Problem to Understand -- ch. 2 Internal Structure of Earth and Plate Tectonics -- Case History: Two Cities on a Plate Boundary -- 2.1.Internal Structure of Earth -- 2.2.How We Know About the Internal Structure of Earth -- 2.3.Plate Tectonics -- A Closer Look: The Wonder of Mountains -- 2.4.A Detailed Look at Seafloor Spreading -- 2.5.Pangaea and Present Continents -- 2.6.How Plate Tectonics Works: Putting It Together -- 2.7.Plate Tectonics and Environmental Geology -- ch. 3 Minerals and Rocks -- Case History: The Asbestos Controversy -- 3.1.Minerals -- 3.2.Important Rock-Forming Minerals -- A Closer Look: Weathering -- A Closer Look: Clay -- 3.3.Rock Cycle -- 3.4.Three Rock Laws -- 3.5.Igneous Rocks -- 3.6.Sedimentary Rocks -- 3.7.Metamorphic Rocks -- 3.8.Rock Strength and Deformation -- Case History: St. Francis Dam -- 3.9.Rock Structures -- ch. 4 Ecology and Geology -- Case History: Endangered Steelhead Trout in Southern California: It's All About Geology -- 4.1.Ecology for Geologists: Basic Terms -- 4.2.Geology and Biodiversity -- A Closer Look: Seawalls and Biodiversity -- 4.3.Ecological Restoration -- A Closer Look: Restoration of the Kissimmee River -- A Closer Look: Restoration of the Florida Everglades -- A Closer Look: Coastal Sand Dune Restoration at Pocket Beaches: University of California, Santa Barbara -- ch. 5 Introduction to Natural Hazards -- Case History: Hurricane Katrina, the Most Serious Natural Catastrophe in U.S. History -- 5.1.Hazards, Disasters, and Natural Processes -- A Closer Look: The Magnitude-Frequency Concept -- 5.2.Evaluating Hazards: History, Linkages, Disaster Prediction, and Risk Assessment -- A Closer Look: Scientists, Hazards, and the Media -- 5.3.The Human Response to Hazards -- 5.4.Global Climate and Hazards -- 5.5.Population Increase, Land Use Change, and Natural Hazards -- A Closer Look: Nevado del Ruiz: A Story of People, Land Use, and Volcanic Eruption -- ch. 6 Earthquakes -- Case History: Italian Earthquake of 2009 and Haiti Earthquake of 2010 -- 6.1.Introduction to Earthquakes -- 6 ... ty -- 6.4.Plate Boundary Earthquakes -- 6.5.Intraplate Earthquakes -- ... dge, 1994 -- 6.7.Earthquake Shaking -- 6.8.Earthquake Cycle -- 6.9. ... cts of Earthquakes -- 6.11.Earthquake Risk and Earthquake Prediction ... ence of Earthquakes in Turkey: Can One Earthquake Set up Another? -- ... ser Look: Earthquake Hazard Evaluation: Ground Motion and Slip Rat ... and the Value of Estimating Potential Ground Rupture -- ch. 7 Tsunami -- ... tion -- 7.2.Regions at Risk -- 7.3.Effects of Tsunamis and Linkages to O ... Hazard -- 7.5.Perception and Personal Adjustment to Tsunami Hazard -- ... , 1991 -- 8.1.Introduction to Volcanic Hazards -- 8.2.Volcanism and Vol ... Magma Forms -- 8.4.Volcano Origins -- 8.5.Volcanic Features -- 8.6.Vol ... ecasting Volcanic Activity -- 8.9.Adjustment to and Perception of the Volcanic Hazard -- ch. 9 Rivers and Flooding -- Case History: Pakistan Floods of 2010 with Implications for the United States -- 9.1.Rivers: Historical Use -- 9.2.Streams and Rivers -- 9.3.Sediment in Rivers -- 9.4.River Velocity, Discharge, Erosion, and Sediment Deposition -- 9.5.Effects of Land Use Changes -- A Closer Look: History of a River -- 9.6.Channel Patterns and Floodplain Formation -- 9.7.River Flooding -- A Closer Look: Magnitude and Frequency of Floods -- 9.8.Urbanization and Flooding -- 9.9.The Nature and Extent of Flood Hazards -- 9.10.Adjustments to Flood Hazards -- A Closer Look: Mississippi River Flooding, 1973 and 1993 --

423 words in table of contents

8 instances of 'environmental'
10 instances of 'geology'
10 instances of 'introduction'

Figure 3. Table of contents note from monograph – 360 unique words added via inclusion of table of contents

Contents

Figure 4. Simple table of contents from solo-authored work

505	0#	The transformation of snow to ice -- Mass balance -- Heat budget and climatology -- Structure and deformation of ice -- Hydraulics of glaciers -- Glacier sliding -- Deformation of subglacial till -- Structures and fabrics in glaciers and ice sheets -- Distribution of temperature in glaciers and ice sheets -- Steady flow of glaciers and ice sheets -- Flow of ice shelves and ice streams -- Non-steady flow of glaciers and ice sheets -- Surging and tidewater glaciers -- Ice core studies.

Figure 5. Simple table of contents in MARC format

History of Iron Technology in India
Vibhn Tripathi

CONTE

Figure 6. More complex table of contents

505	0#	INCIDENCE OF IRON IN THE BRONZE AGE -- ORIGIN AND DISPERSAL OR IRON IN INDIA: The diffusion of technology -- Iron in Rigveda -- Archaeological evidence of iron in the borderlands -- Iron in China -- Indigenous origin of iron in India -- The early Iron Age cultures in India -- Early centres of iron in India -- A multi-centred and indigenous origin of iron in India -- IRON IN ANCIENT INDIA: FROM WROUGHT IRON TO STEEL: Development of metallurgy in ancient India -- Literary references to early iron metallurgy -- Wootz steel -- Iron ore and its mining -- IRON IN INDIA FROM THE IMPERIAL GUPTAS TO THE MIGHTY MOGHULS: Status of iron from the imperial Guptas to the early medieval period -- The monumental structures -- The mighty Moghuls-- The iron cannons -- Production, distribution and marketing mechanism of iron and steel -- Condition of the artisan -- IRON IN BRITISH INDIA: Status of indigenous iron during the British period-- Iron production centres -- Status of indigenous iron: summary and discussion -- The British and European ventures -- The colonial ambition and stagnation of iron production -- Decline of indigenous iron industry -- SURVIVAL AND REVIVAL OF THE INDIGENOUS IRON INDUSTRY: The traditional iron working -- Iron-making in Netarhat Plateau--Jharkhand -- Discussion -- Economic viability.

Figure 7. More complex table of contents in MARC format

Contents

Figure 8. Composite table of contents

505	0#	IMPACT OF CLIMATE VARIABILITY AND CHANGE ON GROUNDWATER-BASED LIVELIHOODS: Groundwater resources assessment under the pressures of humanity and climate change (GRAPHIC) / M. Taniguchi, A. Aureli, J. L. Martin & H. Treidel -- Water supply provision for poverty alleviation in rural areas of Zambia / D. C. W. Nkhuwa -- Increased risk of diarrhoeal diseases from climate change: evidence from urban communities supplied by groundwater in Uganda / R. Taylor, M. Miret-Gaspa, J. Tumwine, L. Mileham, R. Flynn, G. Howard & R. Kulabako -- The influence of hydrochemistry on the distribution of pathogenic strains of Escherichia coli in urban groundwater of Yaounde, Cameroon / M. E. Nougang, M. Nola, T. Njine, S. H. Zebaze Togouet, M. Djaouda & M. Djah -- Groundwater quality monitoring in collaboration with rural communities in Benin / Stephen Silliman, Pamela Crane, Moussa Boukari, Nicaise Yalo, Felix Azonsi & Flavien Glidja -- Chemical quality of groundwater drawn from boreholes in the Ashanti region of Ghana / M. A. Nkansah & J. H. Ephraim -- Reliability of interview data for monitoring and mapping groundwater / D. R. Lightfoot, N. Mavlyanov, D. Begimkulov & J. C. Comer --

Figure 9. Composite table of contents in MARC format (First of multiple 505 fields)

POTENTIAL FOR IMPACT ON ACCESS TO THE GEOSCIENCE LITERATURE

The literature of the geosciences is very long-lived, so the potential value of content enhancement may be higher than in other disciplines. Given that inclusion of tables of contents in catalog records only started to become common in the last decade, there is a wealth of older literature that could benefit from increased access points. In addition, the geoscience literature suffers from long-standing challenges related to cataloging practices for handling items in series. Historically, many libraries treated monographs published in series as serials, allowing them to be processed quickly and easily. Since almost every geological survey had one or more bulletin or report series, libraries with strong geoscience collections tend to have significant numbers of these kind of records. The downside of serial treatments is two-fold. Firstly, access points are extremely limited, typically consisting of the common elements for titles in the series. Thus there are catalog records for "Bulletin (U.S. Geological Survey)" with the subject headings of "Geology – United States" and "Mines and mineral resources – United States" representing thousands of monographic works on myriad topics not well described by the generic subject headings of the serial record. Secondly, these records frequently lack the proper hooks by which linking services, such as CrossRef and SFX, match catalog records to references from abstracting and indexing services. The hook is usually the ISBN, ISSN, or title/author data. These factors combine to limit the discoverability of resources cataloged in such a manner.

The current interest in content enhancement offers both a direct and indirect means for dealing with this issue. In the former instance, the techniques developed to facilitate addition of tables of contents can be utilized to facilitate the create and addition of analytics. In the latter instance, research on the value of content enhancement can be used to justify the need to re-catalog or otherwise enhance the catalog records for the geoscience materials.

CONCLUSIONS

The 2009 OCLC report concluded that "this study is far from the first to find that enrichment data such as summaries and contents notes are important contributors to end user searching…. that users want enriched records…. and that enriched records increase usage of library materials". The challenge is in finding ways to create and share enhanced content in an efficient and effective way. The report urges librarians to work together to achieve this goal. Given the value of the older literature to geoscience research, this challenge is particularly relevant to geoscience librarians.

REFERENCES

Blackwell, 2005, Tables of contents enrichment guide, 35 p.

Dykas, Felicity and Stevens, Ember, 2011, The richer the records, the better the results: options for enriching bibliographic records in your OPAC: 2011 MOBIUS Conference. http://2011conf.mobiusconsortium.org/sessions/richer-record-better-results-options-enriching-bibliographic-records-your-opac

Faiks, Angi, Radermacher, Amy, and Sheehan, Amy, 2007, What ABOUT the book? Google-izing the catalog with tables of contents: Library Philosophy and Practice, LPP Special Issue on Libraries and Google. http://www.webpages.uidaho.edu/~mbolin/lpp2007.htm

Madarash-Hill, Cheri and Hill, J.B., 2004, Enhancing access to IEEE conference proceedings: a case study in the application of IEEE Xplore full text and table of contents enhancements: Science & Technology Libraries, v. 24, no. 3/4, p. 389-399.

Markey, Karen and Calhoun, Karen, 1987, Unique words contributed by MARC records with summary and/or contents notes: Proceedings of the 50th ASIS Annual Meeting, Medford NJ: Learned Information, p. 153–162.

Morris, Ruth C., 2001, Online tables of contents for books: effect on usage: Bulletin of the Medical Library Association, v. 89, no. 1, p. 29-36.

OCLC, 2009, Online catalogs: what users and librarians want; an OCLC report, 58 p. http://www.oclc.org/reports/onlinecatalogs/default.htm

Pennsylvania State University Libraries, Next Generation Public Interface Team, 2009, Table of contents analysis [report], December 9, 2009, 2 p.

Tosaka, Yuji and Weng, Cathy, 2011, Re-examining content-enriched access: its effect on usage and discovery: College and Research Libraries, v. 72, no. 5, p. 412-427.

ESIP FEDERATION: ENHANCING INTEROPERABILITY THROUGH ENABLING COLLABORATION AMONG PRACTITIONERS ACROSS EARTH SCIENCE DOMAINS

MEYER, Carol Beaton
Foundation for Earth Science (ESIP Federation)
6300 Creedmoor Road
Suite 170, #315
Raleigh, NC 27612
carolbmeyer@esipfed.org

Abstract - As an organization, the ESIP Federation (Federation of Earth Science Information Partners) optimizes collaboration and fosters connections among a community of practitioners across the Earth sciences. Its networked, community-driven approach largely is aimed at fostering Earth science interoperability – for data, systems, people and organizations. A variety of connections are needed across distributed communities to reach consensus on issues around formats, data structures, and management systems between multi-scale models and diverse forcing, parameterization, assimilation, and validation data. This synergy between collaboration, a commitment to openness, and broad practitioner expertise allows the ESIP Federation to play an important coordination role for the Earth science data and technology community. Further, the ESIP Federation is fostering the development of a neutral research community that cuts across traditional discipline boundaries, enabling communities to share tools, data and technology. Ultimately, this coordination across sectors and communities will address problems central to the access and use of Earth science data and information, will allow Earth science research to be of higher quality and done more efficiently, and will leverage the work of the many communities contributing to Earth science knowledge.

COPYRIGHT UNCERTAINTY AND GEOSCIENCE INFORMATION: WHAT'S FREE FOR THE TAKING?

CLEMENT, Gail
Associate Professor and Head, Digital Services and Scholarly Communication
Texas A&M Libraries
Texas A&M University
5000 TAMU
College Station, TX 77843
gclement@library.tamu.edu

Abstract - The universe of geoscience information contains a rich variety of content: textual works such as journal articles, books, or monographs; visual materials including maps and imagery; digital multimedia from video to 3-D models, and data resources for use in myriad computer applications. While sophisticated online services and desktop applications make it easier than ever to access a wide range of useful content, legal restrictions may control how geoinformation may be used, modified, distributed and displayed. This presentation provides an overview of the copyright and licensing issues most commonly associated with geoinformation, and offers a few strategies for dealing with copyright uncertainty in the digital age.

INTRODUCTION: WHY DOES COPYRIGHT UNCERTAINTY EXIST IN THE GEOSCIENCE INFORMATION COMMUNITY?

Geoscience information is highly valuable for a wide diversity of users and purposes. Data and information about Earth processes and properties are critical to many sectors of society, from the oil company prospecting for new sources of energy, to the emergency planner evaluating community vulnerability to storm surge; and from the casual trekker, looking for the most efficient trail to scale the next peak, to the farmer concerned about the fertility of his soil beds. In the words of the International Union of Geological Sciences, an understanding of geology is "crucial in protecting human life, health, and assets, and sustaining our environment and resources" (CGI, 2011).

Given the vast public interest that geoscience information represents worldwide, it might be supposed that this rich corpus is freely accessible for use, adaptation, and sharing on a broad scale. But, in fact, that is not the case. A considerable amount of geoscience data and information is owned and managed by entities that control its use through copyright restrictions. Additionally, where geoscience information is ineligible for copyright protection [e.g., numerical data or other facts such as geographic coordinates], proprietary interests may control access through licensing agreements that prohibit reuse and redistribution.

It is regrettable that restrictions on access and re-use of geoscience information can inhibit societally- beneficial discoveries and activities, but these barriers are fully legitimate within the US legal system. Copyright law gives owners of scholarly or creative works nearly exclusive control over the reproduction, adaptation, distribution, and public display of those works for an extensive period of time. [1,2]

In addition to copyright restrictions, a vendor's contractual terms and conditions may further limit what uses can be made of works in cases where the information resource is acquired through a license. The combination of usage restrictions presented by copyright law and vendor licenses can create considerable confusion for geoscience information specialists and the communities they serve.

Moreover, another circumstance adding to copyright uncertainty in the geoscience community is the fact that so much relevant information is freely accessible on the Internet, where Web technologies make it so easy to view and copy the information, select it for downloading or printing, and even forward it on to others. The technological ease with which Internet resources may be accessed and reused gives a misleading impression that they are "free for the taking". In reality, however, much information on the Web is governed by legal restrictions [either copyright and/or licensing terms] that prevent additional uses of the information, such as adapting it and including it in a new work; displaying it in a public lecture; or sharing it with other research collaborators as part of an investigation.

For the above-stated reasons, it is a common point of confusion in the geoscience community [and beyond it] that public access to information equates with the public domain. This is an unfortunate misunderstanding. Just as most books on a public library shelves are freely accessible for borrowing and reading but are not entirely free for copying and redistributing, so are the words, images or numbers on many Web sites, regardless of their ease of access online.

Examples of free geoscience web resources governed by copyright or licenses include:

- a map or image generated from Google Earth [the license that the user clicks through may prohibit republishing the generated image or map];
- a technical report downloaded from a state agency [state government documents may be subject to copyright];
- a map from a federal agency that incorporates a base map created by a private entity and reused by the government with permission.

Figure 1 below illustrates the latter example. The data supplied by USGS is in the public domain, but the base map is subject to copyright restrictions.

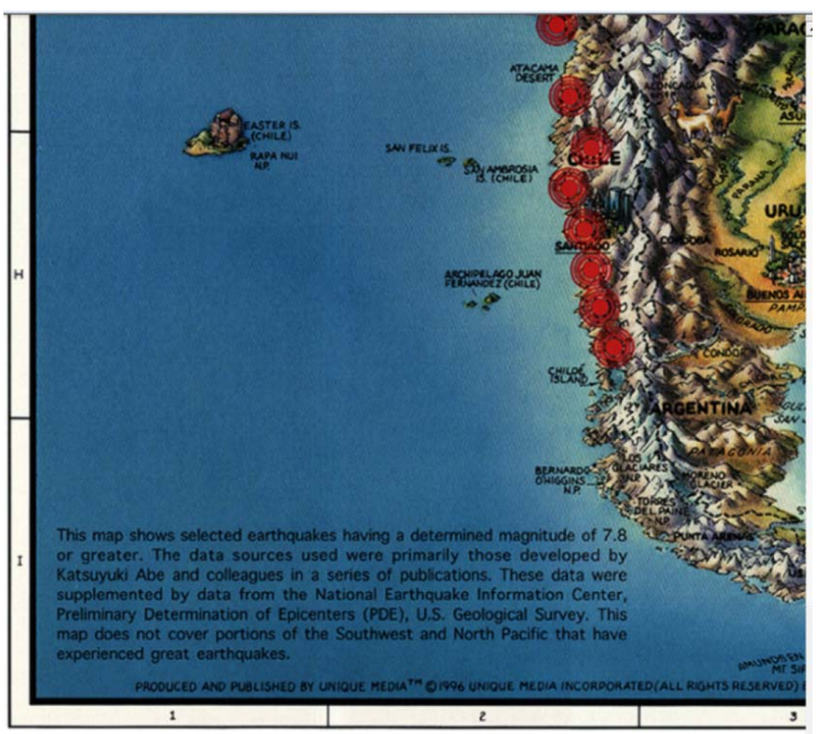


Figure 1. Segment from "Colorful Century Map of Earthquakes from USGS," a printed map sold by USGS, which incorporates a third-party's base map. Note the copyright notice for the third party printed at the bottom of the map. Screen captured from the web at: http://store.usgs.gov/b2c_usgs/

The stark contrast between public expectations of free access to geoscience information and the realities of copyright or licensing restrictions that govern use of these works is a source of copyright confusion and uncertainty in the geoscience community. Unaware that particular information on the Web is either copyrighted, governed by a license, or a combination of the two, users may unknowingly violate the law by making what seem like normal research uses of the content: sharing it with colleagues or students; re-posting to a website, adapting it, and including it in a new presentation or publication . Regardless of their innocent intentions, users may put themselves and their institutions at risk of legal, financial and reputational consequences. In this way, the cost of copyright confusion can be considerable.

It is also important to recognize that copyright confusion can have equally significant costs on the other side of the usage spectrum. When scholars and students who are uncertain and fearful about restrictions on information resources choose NOT to reuse relevant information resources in their works, they may be degrading the potential quality of their research and its potential benefit to society. The topic of copyright uncertainty and the costs of copyright confusion are further addressed in the author's recent column in C&RL News (Clement, 2011).

The author has been investigating copyright uncertainty and confusion in the geosciences in order to develop effective training and outreach programs to serve researchers, students and professionals in this discipline. To that end, a series of papers are being developed that highlight the causes of confusion, along with myths and misunderstanding most prevalent in this community of practice. It is hoped that this work will help geoscience information professionals effectively recognize the sources of copyright uncertainty in their communities and devise effective strategies for addressing users' confusion and concerns.

The present paper focuses on the "lowest hanging fruit" by highlighting the copyright-free (or at least, copyright-reduced) zone within the corpus of geoscience information. The examples provided here illustrate information resources that are "free for taking," or nearly so, meaning they may be re-used, adapted and re-published non-commercially without concerns for legal restrictions. Resources that fall into the "free for the taking" category may be simply ineligible for copyright protection in the first place, or they may be in the public domain because of the nature of the work, its authorship, or its publication history. Resources in the "Nearly Free for the Taking" category are copyrighted, but have been shared under an open license [e.g., Creative Commons] that gives users the right to reuse the work in ways that are typical for scholars, researchers, students and other members of the geoscience community.

At the end of the paper, a list of suggested readings is provided for those wishing a more in-depth examination of the issues touched on here. Readers are encouraged to send additional recommendations for resources or readings to the author for inclusion in the next edition of this paper, which will be updated and maintained as an open access publication through the Texas A&M Digital Repository at http://repository.tamu.edu/.

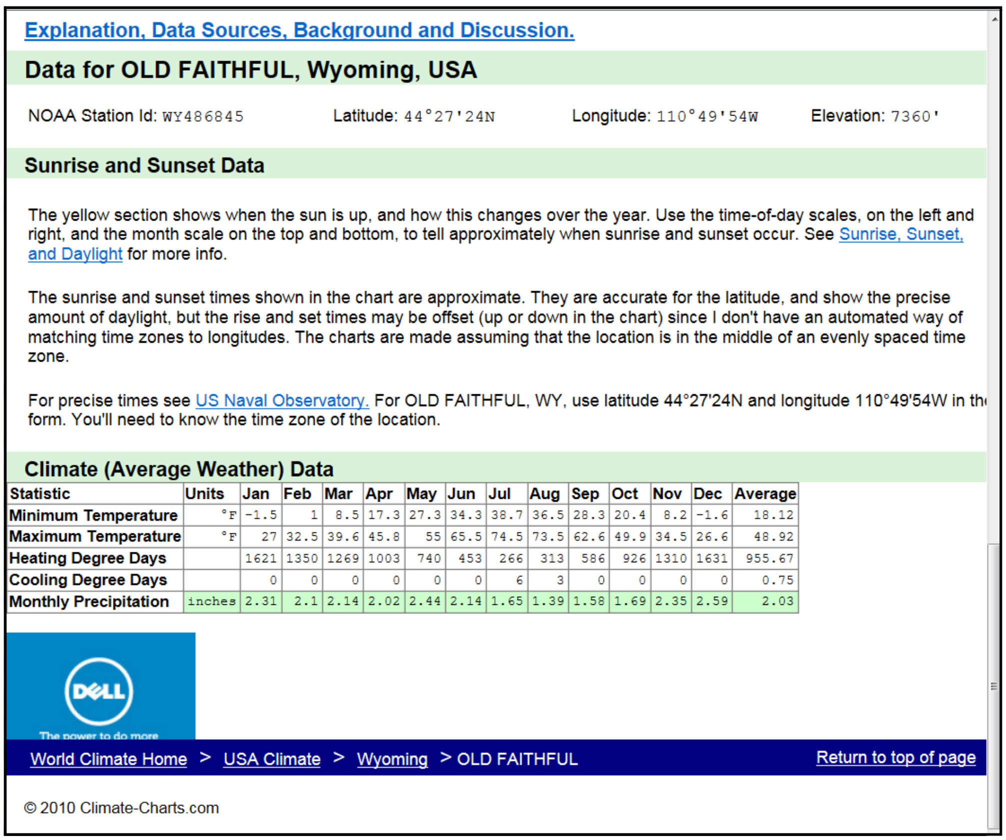
Finally, readers may be interested in knowing that successive papers in this series are being designed to address more complex issues within the general subject of copyright uncertainty within the geosciences. Topics to be included in future works include: Best practices in evaluating and applying copyright exceptions [Fair Use, TEACH, etc.]; understanding terms in licensing agreements that could prohibit research and educational uses; and retaining authors' rights in negotiations with publishers. Readers interested in suggesting additional topics relating to copyright uncertainty in the geosciences are most welcome to write to the author.

GEOSCIENCE INFORMATION RESOURCES THAT ARE "FREE FOR THE TAKING"

Facts

According to US Copyright Law, facts are ineligible for copyright protection because they do not meet the statute's threshold for creativity and originality (USC, Title 17, Section 102). In essence, facts are merely copied from the world around us. While a researcher may make considerable investments to uncover certain facts, US Copyright law simply does not provide for the effort, time or money invested in such activity. This concept, known as the "sweat of the brow" doctrine, was directly addressed by the US Supreme Court in their ruling on the case Feist Publications, Inc., v. Rural Telephone Service Co. (Feist v. Rural, 1991). It is important to keep in mind that facts, while not protected by copyright law, may still need to be cited in accordance with academic and research integrity.

A few examples of facts in the geosciences include the geographic coordinates for Old Faithful [44°27′24″ N 110°49′54″W]; the volume leaked in the Exxon Valdes oil spill [10.8 million gallons, or 257 barrels] (Exxon Valdez Oil Spill Trustee Council, 2010); and the radiocarbon date for our hominid ancestor Lucy [3.18 million years old] (Greene and Moore, 2010). When facts are included in a copyrighted work, such as a map, web page, or research article, users are free to extract and reuse the facts from the source with impunity. The copyright secured by the author for the larger work does not apply to the facts embodied within it. This point is illustrated in the web page shown in Figure 2. Although the page itself is copyrighted by Climate-Charts.com, the latitude and longitude of Old Faithful (as well as the monthly climate data contained within the table) included on the page are not covered by the copyright.



Explanation, Data Sources, Background and Discussion.

Data for OLD FAITHFUL, Wyoming, USA

NOAA Station Id: WY486845 Latitude: 44°27'24N Longitude: 110°49'54W Elevation: 7360'

Sunrise and Sunset Data

The yellow section shows when the sun is up, and how this changes over the year. Use the time-of-day scales, on the left and right, and the month scale on the top and bottom, to tell approximately when sunrise and sunset occur. See Sunrise, Sunset, and Daylight for more info.

The sunrise and sunset times shown in the chart are approximate. They are accurate for the latitude, and show the precise amount of daylight, but the rise and set times may be offset (up or down in the chart) since I don't have an automated way of matching time zones to longitudes. The charts are made assuming that the location is in the middle of an evenly spaced time zone.

For precise times see US Naval Observatory. For OLD FAITHFUL, WY, use latitude 44°27'24N and longitude 110°49'54W in th form. You'll need to know the time zone of the location.

Climate (Average Weather) Data

Statistic	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Minimum Temperature	°F	-1.5	1	8.5	17.3	27.3	34.3	38.7	36.5	28.3	20.4	8.2	-1.6	18.12
Maximum Temperature	°F	27	32.5	39.6	45.8	55	65.5	74.5	73.5	62.6	49.9	34.5	26.6	48.92
Heating Degree Days		1621	1350	1269	1003	740	453	266	313	586	926	1310	1631	955.67
Cooling Degree Days		0	0	0	0	0	0	6	3	0	0	0	0	0.75
Monthly Precipitation	inches	2.31	2.1	2.14	2.02	2.44	2.14	1.65	1.39	1.58	1.69	2.35	2.59	2.03

World Climate Home > USA Climate > Wyoming > OLD FAITHFUL Return to top of page

© 2010 Climate-Charts.com

Figure 2. Web page at the site http://www.climate-charts.com/USA-Stations/WY/WY486845.php, indicating that the page is copyrighted. But the facts contained in the page are not and therefore may be freely used without restrictions.

US Federal Works

A common point of copyright confusion in the geosciences (and other fields) is that all government works are in the public domain and therefore free for the taking. However, only those works created by US federal employees, as part of their regular assignments, are free of copyright restrictions according to US Copyright law. The statutory provision covering federal government works states (USC, Title 17, Section 105):

> "Copyright protection under this title is not available for any work of the United States Government…"

Examples of US federal works that are free of copyright restrictions include the following

- Photo entitled "Deepwater Horizon Controlled Oil Burn" taken 06/09/2010, Credit: U.S. Coast Guard, Photographer: Petty Officer First Class John Masson, U.S. Coast Guard
- The Geologic Atlas of the United States, originally published by the USGS and digitally republished in whole and in part and distributed worldwide by several institutions -Note that digitization of a public domain work does not, in and of itself, quality the digital version for copyright protection.
- Published, peer-reviewed article authored by three USGS scientists

An example of the latter is shown in Figure 3 below. Note that the publisher -- in this case Elsevier -- cannot claim copyright in the article because all the authors are employees of a US federal agency.

International Journal of Coal Geology 94 (2012) 337–348

Contents lists available at SciVerse ScienceDirect

International Journal of Coal Geology

journal homepage: www.elsevier.com/locate/ijcoalgeo

ELSEVIER

Leaching of elements from bottom ash, economizer fly ash, and fly ash from two coal-fired power plants

Kevin B. Jones *, Leslie F. Ruppert, Sharon M. Swanson

U.S. Geological Survey, Mail Stop 956, Reston, VA 20192, USA

ARTICLE INFO

Article history:
Received 25 July 2011
Received in revised form 4 October 2011
Accepted 8 October 2011
Available online 15 October 2011

Keywords:
Coal combustion products
Fruitland Formation
Leaching
Pittsburgh coal
TCLP
SGLP

ABSTRACT

To assess how elements leach from several types of coal combustion products (CCPs) and to better understand possible risks from CCP use or disposal, coal ashes were sampled from two bituminous-coal-fired power plants. One plant located in Ohio burns high-sulfur (about 3.9%) Upper Pennsylvanian Pittsburgh coal from the Monongahela Group of the Central Appalachian Basin; the other in New Mexico burns low-sulfur (about 0.76%) Upper Cretaceous Fruitland Formation coal from the San Juan Basin, Colorado Plateau. The sampled CCPs from the Ohio plant were bottom ash (BA), economizer fly ash (EFA), and fly ash (FA); the sampled CCPs from the New Mexico plant were BA, mixed FA/EFA, FA, and cyclone-separated coarse and fine fractions of a FA/EFA and FA blend. Subsamples of each ash were leached using the long-term leaching (60-day duration) component of the synthetic groundwater leaching procedure (SGLP) or the toxicity characteristic leaching procedure (TCLP, 18-hour duration). These ashes were all alkaline. Leachate concentrations and leachabilities of the elements from the CCPs were similar between corresponding CCP types (BA, EFA, and FA) from each plant. The leachabilities of most elements were lowest in BA (least leachable) and increased from EFA to FA (most leachable). Ca and Sr were leached more from EFA than from either BA or FA. Leachability of most elements also increased as FA particle size decreased, possibly due in part to increasing specific surface areas. Several oxyanion-forming elements (As, Mo, Se, U, and V) leached more under SGLP than under TCLP; the opposite was true for most other elements analyzed.

Published by Elsevier B.V.

1. Introduction

Coal combustion by coal-fired power plants, cement plants, and steel plants produces large quantities of coal combustion products

condenses, as flue gases cool, into mainly fine-sand-sized and smaller, glassy, hollow silicate spherules called cenospheres. A portion of the FA can be captured by electrostatic precipitators (ESPs) or by fabric filters in baghouses (Meawad et al., 2010). Economizer fly ash (EFA)

Figure 3. This article, authored by three USGS scientists, was published copyright-free by Elsevier in the *International Journal of Coal Geology* 94 (2012) 337–348.

In considering the public domain status of US federal works, it is important to keep in mind that some works *owned* by the government may in fact be copyrighted, as indicated by the concluding sentence of Section 105: “the United States Government is not precluded from receiving and holding copyrights transferred to it by assignment, bequest, or otherwise”. It is therefore possible, although uncommon, to encounter U.S. federal publications, images and websites that are copyrighted.

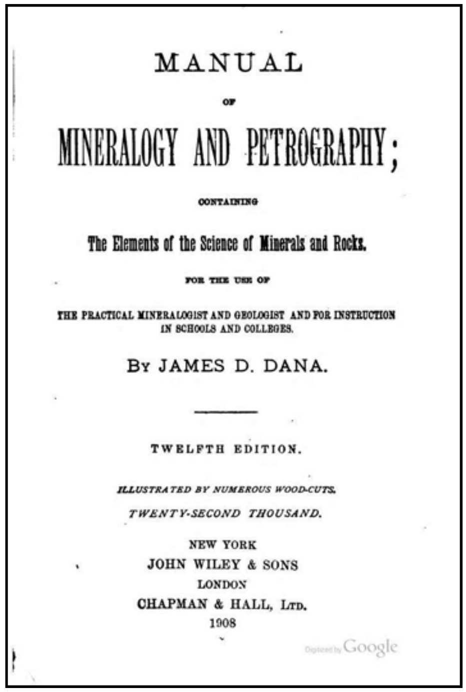
Another category of geoscience information that may be copyrighted are works created with grant funding from federal agencies. For example, university researchers who successfully apply for NSF grant funding to underwrite their investigations generally retain the copyright in their research deliverables. Nothing in the federal agencies’ policy prevents the university scientists from transferring their copyright in federally-funded works to a commercial publisher, who may then charge fees for access to the published version of the work. Essentially, this situation means that US taxpayers pay for the research twice – once in funding the research, and a second time in buying research results from the publisher. The fact that federally funded research is not, at present, “free for the taking” has raised the ire of both lawmakers and citizens who have banded together to improve this situation with new legislation. Known as the “Federal Research Public Access Act” or “FRPAA” [H.R. 4004 and S. 2096], this proposed law would “ensure free, timely, online access to the published results of research funded by eleven U.S. federal agencies” (Alliance for Tax Payer Access, 2012). Additional information about FRPAA is included in the readings list at the end of this paper.

Other geoscience works in the public domain

Works may also be in the public domain if their terms of copyright have expired, or if they were never copyrighted in the first place. It is sometimes difficult to determine whether a work eligible for copyright protection is, at present, in the public domain, so the assistance of a local copyright specialist or the US Copyright Office may be needed.

For those intending to research the copyright status of a given work themselves, one straightforward principle to keep in mind is that all works published and copyrighted in the United States before 1923 are now in the public domain. Beyond that category, a more complex calculation must be made to determine if an eligible work is copyrighted or not. Factors in making in this determination include whether the work was published or not; whether a work, if published in the US before 1989, complied with statutory requirements of copyright notice and registration; and whether a work copyrighted under the 1909 Copyright Statute (in effect until 1978) was renewed for a second term. A useful tool for assessing whether a work is in the public domain is Peter Hirtle’s chart “Copyright Term and the Public Domain in the United States” (Cornell Copyright Information Center, 2012).

Numerous classic geoscience works from the pre-1923 era are now in the public domain, and many can be found as full text digital editions freely available for downloading, reading, printing and redistribution from digital library sites such as the Internet Archive (http://archive.org/) and the HathiTrust (http://www.hathitrust.org/). The title page from one such book – Dana’s Manual of Mineralogy and Petrography, Twelfth Edition, originally published in 1908 and now digitally available from the Internet Archive, is shown in Figure 4.



MANUAL

OF

MINERALOGY AND PETROGRAPHY;

CONTAINING

The Elements of the Science of Minerals and Rocks.

FOR THE USE OF

THE PRACTICAL MINERALOGIST AND GEOLOGIST AND FOR INSTRUCTION IN SCHOOLS AND COLLEGES.

BY JAMES D. DANA.

TWELFTH EDITION.

ILLUSTRATED BY NUMEROUS WOOD-CUTS.

TWENTY-SECOND THOUSAND.

NEW YORK
JOHN WILEY & SONS
LONDON
CHAPMAN & HALL, LTD.
1908

Figure 4. Formerly copyrighted monograph that has been digitally republished by the Internet Archive.

GEOSCIENCE INFORMATION RESOURCES THAT ARE "NEARLY FREE FOR THE TAKING"

The last category of works that are generally available for reuse, adaptation and redistribution are those issued under an open content license. "Open content" refers to works that are copyrighted but have been made available, with the owner's permission, "in a manner that provides users with the right to make more kinds of uses than those normally permitted under the law - at no cost to the user" (Open Content, 2012).

One popular type of open content license in use today is the set developed by Creative Commons, "a nonprofit organization that enables the sharing and use of creativity and knowledge through free legal tools" (Creative Commons, 2012). Creative Commons licenses may be found on myriad works of scholarship and creativity: doctoral dissertations, peer reviewed articles, open textbooks and course materials, music, videos, and more.

Examples of CC-licensed works in the geosciences include the photograph and the peer-reviewed article shown in Figures 5 and 6. Additional information about CC-licensing is available from the organization's website. Related readings are also included in the last section of this paper.

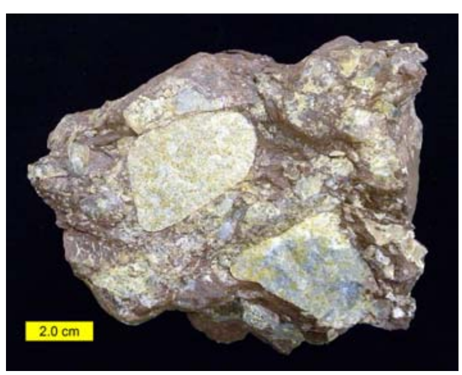
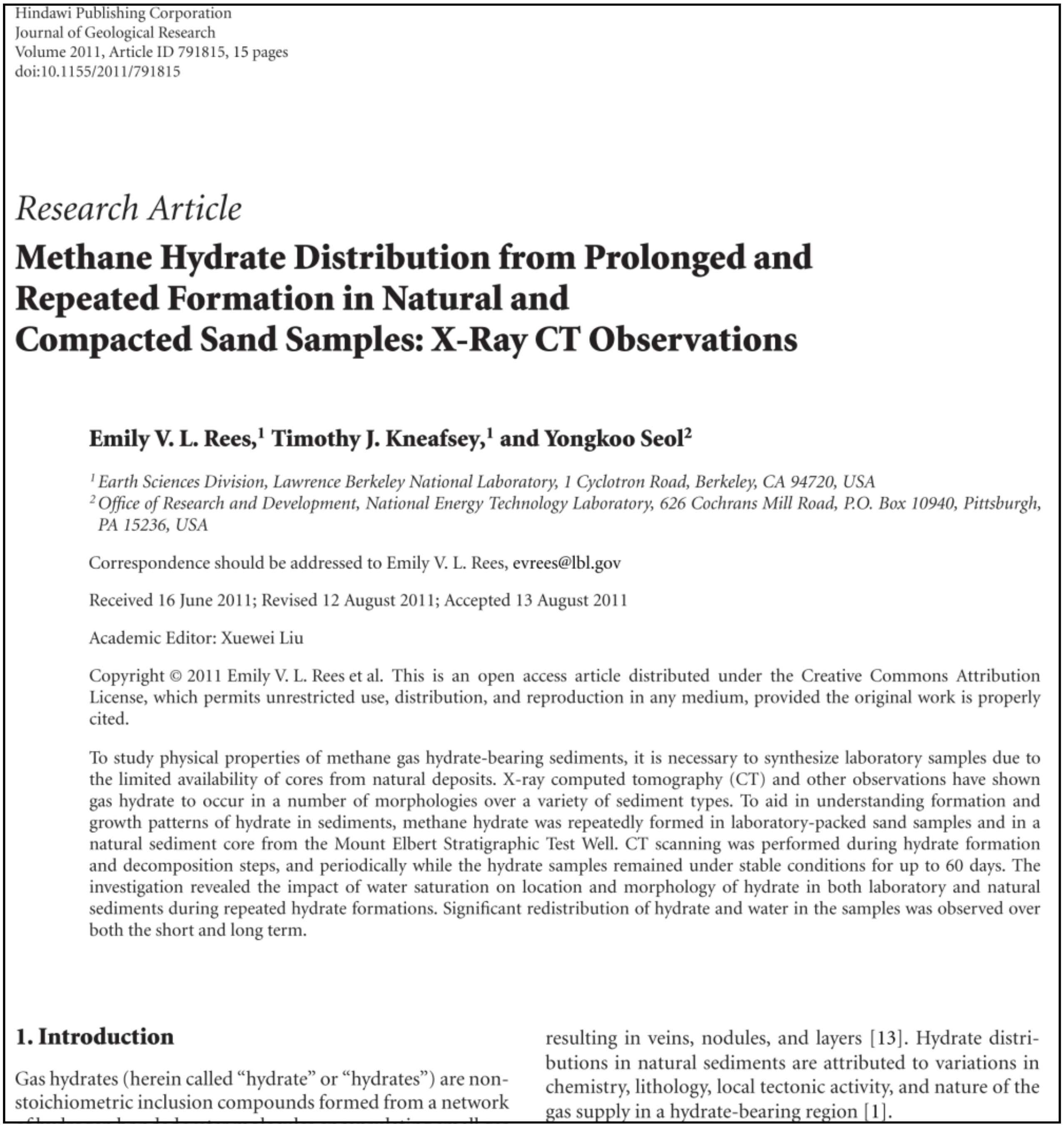


Figure 5. According to the website of Mark A. Wilson, Department of Geology at the College of Wooster (http://sedstrat.voices.wooster.edu/), this picture of Triassic breccia is licensed under the Creative Commons Attribution-Share Alike 3.0 United States License. This license allows users to copy and redistribute the photograph for any purpose. The "Share Alike" designation in this license allows the user to also modify the image, as long as the new version is disseminated under the same CC license as the original.



Hindawi Publishing Corporation
Journal of Geological Research
Volume 2011, Article ID 791815, 15 pages
doi:10.1155/2011/791815

Research Article

Methane Hydrate Distribution from Prolonged and Repeated Formation in Natural and Compacted Sand Samples: X-Ray CT Observations

Emily V. L. Rees,[1] Timothy J. Kneafsey,[1] and Yongkoo Seol[2]

[1] *Earth Sciences Division, Lawrence Berkeley National Laboratory, 1 Cyclotron Road, Berkeley, CA 94720, USA*
[2] *Office of Research and Development, National Energy Technology Laboratory, 626 Cochrans Mill Road, P.O. Box 10940, Pittsburgh, PA 15236, USA*

Correspondence should be addressed to Emily V. L. Rees, evrees@lbl.gov

Received 16 June 2011; Revised 12 August 2011; Accepted 13 August 2011

Academic Editor: Xuewei Liu

Copyright © 2011 Emily V. L. Rees et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

To study physical properties of methane gas hydrate-bearing sediments, it is necessary to synthesize laboratory samples due to the limited availability of cores from natural deposits. X-ray computed tomography (CT) and other observations have shown gas hydrate to occur in a number of morphologies over a variety of sediment types. To aid in understanding formation and growth patterns of hydrate in sediments, methane hydrate was repeatedly formed in laboratory-packed sand samples and in a natural sediment core from the Mount Elbert Stratigraphic Test Well. CT scanning was performed during hydrate formation and decomposition steps, and periodically while the hydrate samples remained under stable conditions for up to 60 days. The investigation revealed the impact of water saturation on location and morphology of hydrate in both laboratory and natural sediments during repeated hydrate formations. Significant redistribution of hydrate and water in the samples was observed over both the short and long term.

1. Introduction

Gas hydrates (herein called "hydrate" or "hydrates") are non-stoichiometric inclusion compounds formed from a network

resulting in veins, nodules, and layers [13]. Hydrate distributions in natural sediments are attributed to variations in chemistry, lithology, local tectonic activity, and nature of the gas supply in a hydrate-bearing region [1].

Figure 6. Segment from the first page of a peer-reviewed geoscience article published in the open access, peer-reviewed *Journal of Geological Research* from Hindawi Publishing Corp. Note that the copyright statement identifies the authors, not the publisher, as the owner of the work. Also note that the copyright statement includes a Creative Commons license, allowing extensive reuse of the article as long as the work is properly cited.

CONCLUSION

Considerable amounts of quality geoscience information are freely available on the Internet and in research libraries, but these works are not necessarily free of copyright or licensing restrictions. Users are responsible for understanding the copyright status of a work they intend to use, and for complying with legal restrictions governing the work. Gaining a clear understanding of copyright, however, is often a challenging task leaving users confused about whether a work is okay to use, or what restrictions may apply.

One way to reduce copyright confusion in the geoscience community is to help users identify those information resources that are free of legal restrictions, allowing the kinds of uses typical of these workers. This category includes materials that are either ineligible for copyright protection or are in the public domain. Additionally, works that are copyrighted but distributed with a Creative Commons license are also good candidates for reuse by geoscience users. Thanks to advanced features in Internet search engines, it is getting easier to find and locate works that are "free for the taking." For example, using Google's Advanced Search feature, a search on the term "gas hydrates" with the "usage rights" field set to "Free to use, share or modify, even commercially" yields almost 8000 results. Included in this set are high-resolution photographs, animations, distribution maps, agency fact sheets, and peer reviewed journal articles. Each of these items may be not only downloaded and printed for free, but also shared with colleagues and students, included in presentations and lectures, adapted for future use, and reprinted in a new publication. By understanding what information is "free for the taking," geoscience users will be less confused, more confident, and better empowered to take advantage of other's works while remaining fully compliant with copyright law.

SUGGESTED READINGS & RESOURCES

Association of Research Libraries (2012) Federal Research Public Access Act (FRPAA) of 2012, Online, URL: http://www.arl.org/pp/access/frpaa-2012.shtml; last accessed 6-22-1012.

Gordon-Murnane, L. (2010). Creative Commons: Copyright Tools for the 21st Century. Online (Weston, Conn.), 34(1), 18-21.

Kleinman, M. (2008). The beauty of "Some Rights Reserved": Introducing Creative Commons to librarians, faculty, and students. College & Research Libraries News, 69(10), 594-597.

Karjala, Dennis (1995). Copyright in Electronic Maps, Jurimetrics Journal 35, 395-415.

Scholarly Publishing and Academic Resources Coalition (SPARC), Call to Action. Online, URL: http://www.arl.org/sparc/media/FRPAA2012.shtml; last accessed 6-22-1012.

US Copyright Office, How to Investigate the Copyright Status of a Work, Circular 22, Online, URL: http://www.copyright.gov/circs/circ22.pdf; last accessed 6-22-2012.

ENDNOTES

1. The phrase "nearly exclusive control" refers to the existence of several exceptions in the law, such as Fair Use or the TEACH Act (Section 107 and 110(2), respectively), that permit socially beneficial uses of copyrighted works without the owner's permission. These exceptions are available only where the particular use meets very specific criteria, as specified in the law.

2. Owners' rights are represented in the US Copyright Statute as USC Title 17, Section 106; the term of copyright is represented in USC Title 17, Sections 302-305. The US Copyright Statute may be found in full text online at the US Copyright Office, URL: http://www.copyright.gov/title17/; (accessed 6-22-2012).

REFERENCES CITED

Alliance For Tax Payer Access, http://www.taxpayeraccess.org/action/action_frpaa/FRPAA2012.shtml (accessed 6-22-2012).

Commission for the Management and Application of Geoscience Information (CGI), "Objectives," http://www.cgi-iugs.org/objectives.html (accessed 6-22-2012).

Clement, Gail, 2011, The copyright self-help movement: Initiatives in the library community, College & Research Libraries News, 72(7), 404-415, URL: http://crln.acrl.org/content/72/7/404.full (accessed 6-22-2012).

Cornell Copyright Information Center, Cornell University, http://copyright.cornell.edu/resources/publicdomain.cfm (accessed 6-20-2012).

"About Creative Commons," Creative Commons, http://creativecommons.org/about (accessed 6-22-2012).

Exxon Valdez Oil Spill Trustee Council, "Questions and Answers," http://www.evostc.state.ak.us/facts/qanda.cfm (accessed 6-20-2012).

Feist Publications, Inc., v. Rural Telephone Service Co., 499 U.S. 340, 1991.

Greene, Kevin and Moore, Tom, 2010. Dating the Past, in Archaeology: An Introduction, p. 177, Taylor & Francis, 394 p.

"Defining the "Open" in Open Content," Open Content http://opencontent.org/definition/ (accessed 6-22-12).

United States Code, Title 17, Section 102, "Subject matter of copyright: In general"

United States Code, Title 17, Section 105, "Subject matter of copyright: United States Government works"

DISCOVERING THE VALUE OF HISTORIC MATERIALS IN THE GEOSCIENCES

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

and

ADAMO, Lisa
U.S. Geological Survey
12201 Sunrise Valley Drive, MS 950
Reston, VA 20192

Abstract - Geoscience research is often called a "cumulative science" since the discoveries of today do not replace discoveries made by previous researchers. This suggests that current research efforts can and should consider the findings of prior research efforts - regardless of their age - and that new discoveries can be found through placing historic research outputs into modern contexts. This presentation will look at seminal works in the geosciences and identify approaches for the rediscovery of information lost in time and the pages of library books.

JUST DIGITIZE IT! : THE J. WILLARD MARRIOTT LIBRARY 'S ENDEAVOR TO BRING GEOLOGICAL SCHOLARSHIP TO THE WORLD

WILLIAMS, Donald G.
Collection Development: Institutional Repository
J. Willard Marriott Library
University of Utah
295 S. 1500 E
Salt Lake City, UT 84112
donald.williams@utah.edu,

and

SORENSEN, Justin B.
Digital Scholarship Lab
J. Willard Marriott Library
University of Utah
295 S. 1500 E
Salt Lake City, UT 84112

and

CHAUFTY, Lisa M.
Collection Development: Institutional Repository
J. Willard Marriott Library
University of Utah

Abstract - The need to organize, preserve, and share the geoscience materials available at the University of Utah motivated the J. Willard Marriott Library's Geospatial Information Committee to begin a project of digitizing the University of Utah's geological theses and dissertations and their associated maps.

As a pilot project, the library's Geospatial Information Committee compiled a list of ninety-three geology theses and dissertations created by University of Utah students during the years 1950-1975. Using this list, the library's institutional repository staff collected the materials for digitizing. The Institutional Repository Department scanned the texts, while the oversized maps were digitized by the library's Digital Technologies Department. The resulting files were added to USpace (uspace.utah.edu –an instance of DSpace), the University of Utah's institutional repository, bringing texts and maps together (at last) into a digital environment.

While the digitization project progressed, the Geospatial Information Committee enlisted the assistance of the library's Geospatial Information Specialist to georeference the map images and create files, which can be utilized for 3-D viewing and spatial analysis using GIS software. As a final step, these files are included in USpace and linked to their corresponding thesis for users to download and manipulate in GIS programs or view in Google Earth.

What began as a project of the J. Willard Marriott Library's Geospatial Information Committee to improve access to geological scholarship has evolved into a multi-departmental endeavor to not only make the material easily accessible, but interactive as well.

INTRODUCTION

Collecting, sharing and preserving information resources has long been the function of libraries, and the emergence of new technologies facilitates our ability to access and analyze information in a variety of exciting and dynamic ways. By digitizing, archiving and georeferencing geology theses and dissertations along with their accompanying maps, the J. Willard Marriott Library has utilized such technologies to share the geological resources produced at the University of Utah. This paper describes the processes, tools and collaborative efforts employed by the Library's GSI committee to inspire the creation, discovery, and use of knowledge for Utah and the world.

USPACE INSTITUTIONAL REPOSITORY

USpace (uspace.utah.edu) is an open-access digital archive containing scholarly work produced by members of the faculty, staff, and student body of the University of Utah. The purpose of USpace is to collect, maintain, and preserve all scholarly work produced at the university, including journal articles (pre- and post- print); conference papers and proceedings; creative research; and theses and dissertations, with the mission of sharing that research with the world.

USpace Process/Pre-Georeferencing

Utilizing the information compiled by the Geospatial Information Committee, USpace staff collected the print theses, dissertations and maps from the library's collections which were published between 1950 and 1975. The theses created in this time frame were chosen for copyright and permission reasons. Since USpace is an open-access archive, only items not under copyright or embargo restrictions or which permission has been granted by the rights holder, can be added to the repository. An online digital slider tool was also used to aid copyright and permissions research (http://librarycopyright.net/digitalslider/). The process of retrieving these materials from multiple locations was an arduous task as the various items were distributed throughout the open stacks or several floors away in Special Collections. Because geology materials are occasionally sought after by treasure hunters, titles missing from our collections were retrieved from the Geology Department. The effort expended to simply collect each component of a single thesis underscored the need to have these works and their accompanying maps digitized and linked together to be easily accessible online.

USpace staff scanned each thesis at 400 dpi using a flatbed scanner to create high-quality PDF files of each thesis. The maps associated with each thesis were scanned into TIFF files by Digital Technologies staff on a large format scanner with a resolution of 300 dpi.

After USpace staff uploaded the texts and accompanying map images to the repository, they applied descriptive and technical metadata using the Dublin Core Metadata Standard. These items are available online through such discovery tools as the Marriott Library's catalog, the USpace search page, and Google. To initiate the next stage in the project, USpace staff delivered the map TIFF files to the Geospatial Information Specialist for georeferencing.

GEOREFERENCING

Georeferencing is a process by which a two dimensional print image is scanned and input into a GIS program and aligned to match features in the physical world. Through this process the image's existence is defined within physical space.

The georeferencing process begins by first uploading the scanned TIFF's into a GIS program and converting them into JPEG format. The reason for this conversion is to decrease the file size for user access. Reference layers consisting of satellite imagery, USGS Topographic maps, and gridlines are added into the GIS program to align the geologic features within the scanned maps to their defined geographic locations. The

Utah Geological Survey (UGS) was consulted and met with library's GSI committee. The UGS representatives provided useful information regarding map projections, and advised the committee to use the North American Datum 1927 (NAD 27) projected coordinate system to ensure this project was in conformity with state and federal protocols (National Geodetic Survey, 2012).

Using a georeferencing tool available in ArcGIS to install control points locks the geologic features in the scanned map to corresponding features in the reference layers. The goal of this process is to align the map as accurately as possible; however, this process is not an exact science and even the best-aligned maps may have a degree of error. This process warps the map as it aligns to the geologic features that remain consistent over time, and the image is rectified to save the projection for future use.

The final step in this process is to compress the folder containing the JPEG and associated world files, which tell the GIS program how and where to project the map. These files were delivered to USpace staff to be uploaded and linked to their corresponding theses in the repository.

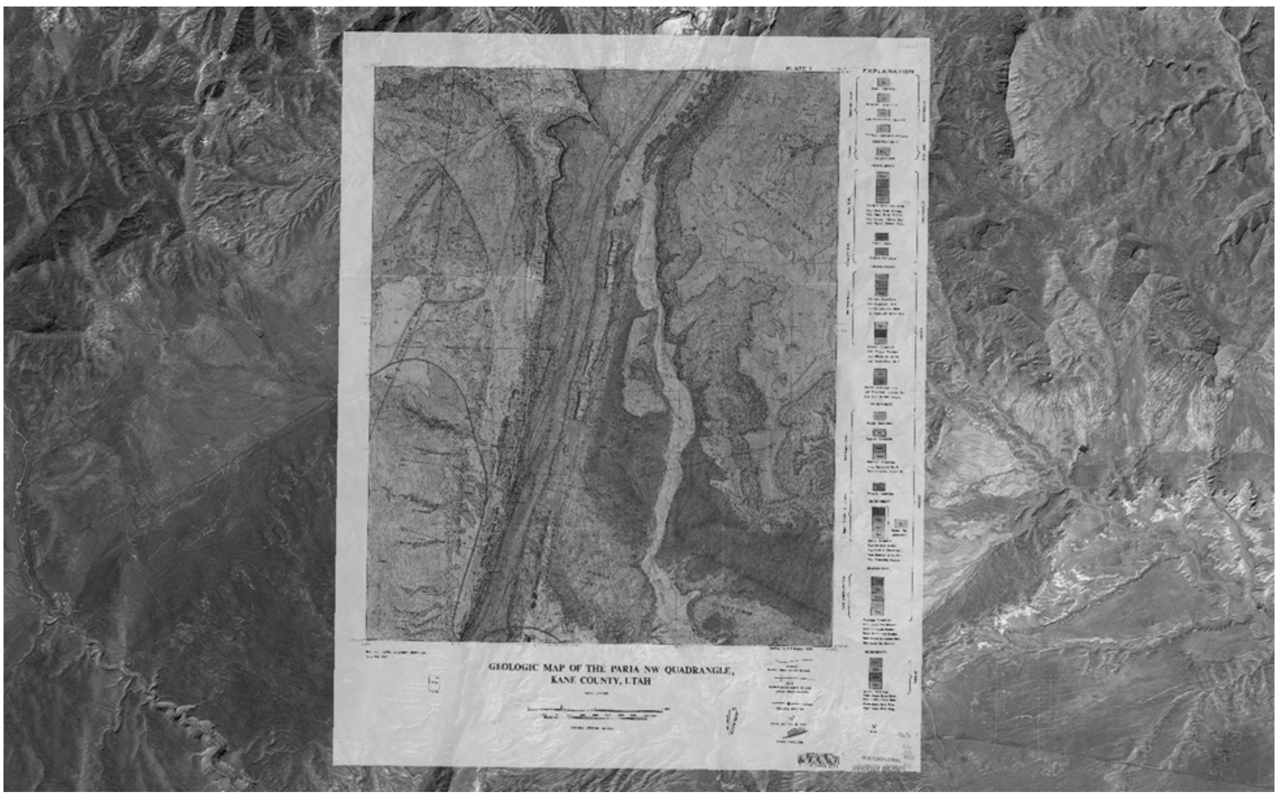


Figure 1. Example of a georeferenced map. Notice how the map overlays the topographic image and the geological features align. (Blakey, 1970)

WORLDWIDE ACCESS

USpace

Anyone with Internet access can view and download the geology theses, scanned map images, and georeferenced map files held in USpace. Additionally, the georeferenced files can be entered into GIS software, such as ArcGIS, for further study and analysis.

Google Earth

A Google Earth interface was created for individuals who either have a limited background in GIS or do not have access to GIS software. This user-friendly and universally available tool allows easy access to the digital theses and georeferenced materials.

This interface consists of 108 points representing each of the georeferenced maps located in the area that each map depicts. Users can access any of these points to view a dialog box containing information related to its corresponding map and text. This information includes basic descriptive metadata and a thumbnail example of the map. The dialog box also contains links to access the digital text available in USpace as well as links to overlay the georeferenced KML version of the map in Google Earth. This interface is currently featured through the Google Earth Gallery, allowing worldwide access to the information.

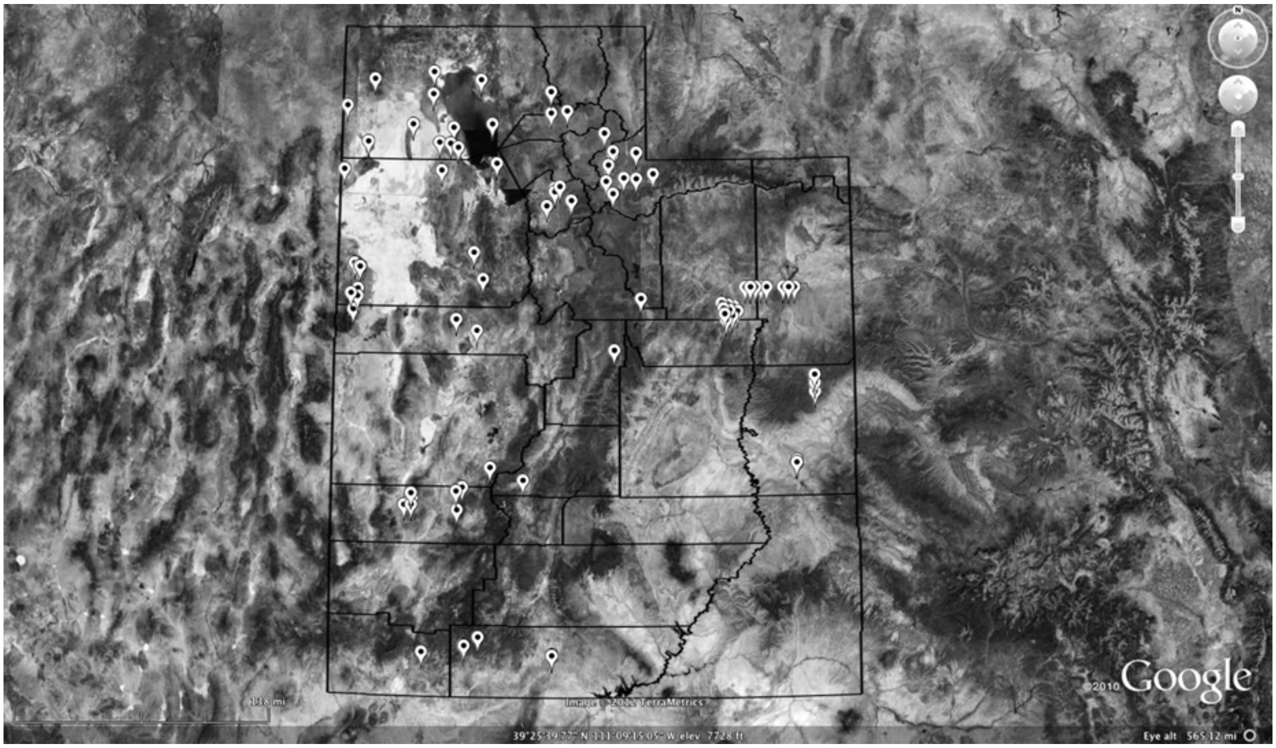


Figure 2. Image of the 108 points representing georeferenced maps as it appears in Google Earth. © Google (Williams and Sorensen, 2012)

CONCLUSIONS

This project, which sprouted from a desire to make the University's geologic theses, dissertations, and maps more accessible to the public, blossomed into a dynamic and collaborative effort involving several library departments, committees, university departments and government agencies.

It stands as a testament to the result of inter-departmental cooperation and partnerships and helps fulfill the USpace and Marriott Library's mission to collect, maintain, preserve, record and provide access to the intellectual capital and output of the University of Utah, to reflect the University's excellence, and to share that work with others.

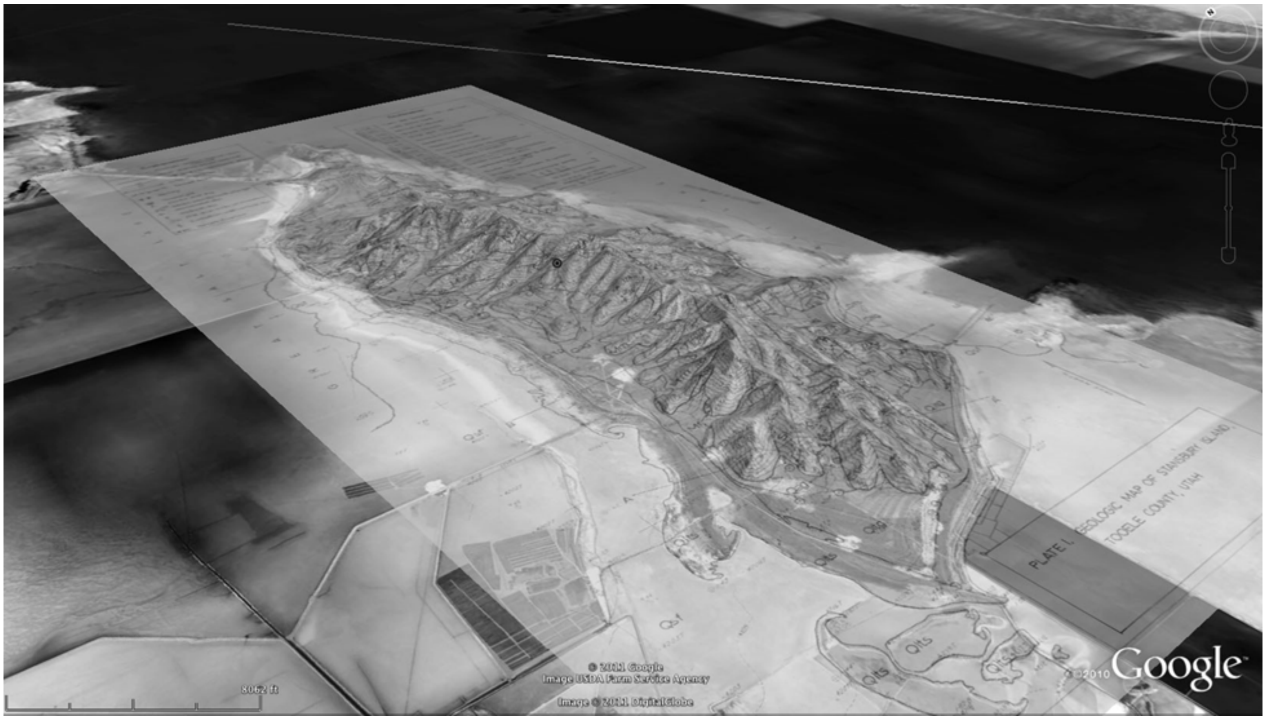


Figure 3. Example of a three dimensional view in Google Earth of a georeferenced map. © Google (Chapusa, 1969)

REFERENCES

Blakey, R., 1970, Geology of the Paria Northwest quadrangle Kane County, Utah (Google Earth map overlay KMZ file), http://content.lib.utah.edu/u?/us-etd3,69390, accessed March 21 2012.

Chapusa, F., 1969, Plate 1 Geologic map of Stansbury Island, Tooele County, Utah (Google Earth map overlay KMZ file), http://content.lib.utah.edu/u?/us-etd3,69373, accessed 22 March 2012.

Dublin Core Metadata Initiative, 2012, Dublin Core Usage Guide: http://dublincore.org/documents/usageguide/, accessed 28 March 2012.

Google Earth, 2012: http://www.google.com/earth/index.html

J. Willard Marriott Library, 2012, Mission, vision and values: http://www.lib.utah.edu/info/mission.php, accessed 22 March 2012.

J. Willard Marriott Library, 2012, USpace mission: http://www.lib.utah.edu/uspace, accessed 22 March 2012.

National Geodetic Survey, 2012, Frequently asked questions: http://www.ngs.noaa.gov/faq.shtml, accessed 28 March 2012.

Utah Geological Survey, 2012: http://geology.utah.gov/

Williams, D. and Sorensen, J. 2012, Just digitize it! The J. Willard Marriott Library's endeavor to bring geological scholarship to the world: http://www.google.com/gadgets/directory?synd=earth&hl=en&gl=&preview=on&q=just+digitize+it, accessed 21 February 2012.

DELIVERING GEOSCIENCE KNOWLEDGE IN FEDERAL SYSTEMS

JACKSON, Ian
Information Directorate
British Geological Survey
Keyworth, Nottingham, NG12 5GG
United Kingdom
ij@bgs.ac.uk

and

BROOME, John
Earth Sciences Sector
615 Booth Street
Ottawa, ON K1A0E8, Canada

and

ALLISON, M. Lee
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ 85701-1381

Abstract - Across the globe, geological communities are facing the same four challenges: put simply, how do we best make data discoverable, shareable, viewable and downloadable, so that the user also has access to consistent data at a national and continental level? The principle of managing scientific data and knowledge where it is generated and is best understood is well established in the science community. The distributed nature of most data sources means the complementary delivery mechanism of web map services has become equally prevalent in the spatial data community. Together these two factors are driving a world-wide revolution in the way spatial geoscience information is being disseminated to its users. The outcome is that data are being managed and delivered from multiple component sources - a federated system - ie the individual states within a union. These systems exist in the USA, in Canada, in Australia, and progressively, also in Europe, where the European Union can be regarded as a federal analogue, and where new regulation is placing the force of law behind spatial data infrastructures. In these "systems" addressing the four challenges are however, far from simple. To address them means finding solutions to adequate but workable metadata description, data specifications which encompass the richness of the data but deliver continuity, web map interfaces which allow flexible access but are easy to use, and last but not least intellectual property rules that protect the originator but provide the data the users need. The models for collaboration emerging in each of the federated systems are moving towards consensus on a global digital integration framework in the geosciences. This paper will introduce a session which will draw on the rich experience in North America and Europe, and explore the way the challenges have been articulated and addressed with a strong emphasis on gaining future benefit by sharing the lessons learned.

THE NATIONAL GEOLOGIC MAP DATABASE PROJECT'S ADVENTURES IN MANAGING OLD FOSSILS AND GEOLOGIC NAMES

STAMM, Nancy R.
U.S. Geological Survey
926-A National Center
Reston, VA 20192
nstamm@usgs.gov

SOLLER, David R.
U.S. Geological Survey
926-A National Center
Reston, VA 20192

WARDLAW, Bruce R.
US Geological Survey
926A National Center
Reston, VA 20192-0001

ORNDORFF, Randall C.
U.S. Geol. Survey
MS 908
Reston, VA 20192

and

WARDWELL, Robert C.
U.S. Geological Survey
1300 SE Cardinal Ct.
Building 10, Suite 100
Vancouver, WA 98683

Abstract - “I want my data found, and used.” This sentiment is commonly expressed by paleontologists who anticipate that their data and interpretations can be useful for new science and mapping. Because much of this information is contained in their unpublished notes and records, it is critically important to work closely with these scientists to identify the authoritative version of each piece of information, and then to present it on the Web, clearly and in a manner that preserves the author's intent. This can be done by providing scans of the paleontologist's records, supported by simple geographic and text searches. We have begun to do this, as a component of the National Geologic Map Database (NGMDB). When this information becomes available, paleontologists and geologic mappers will be able to access the original biostratigraphic data more readily than is possible today, thereby expanding its use and value for science.

GEOLEX, a standard reference for the Nation's stratigraphic nomenclature has been available online since 1998. Over the last few years we focused on redesigning this database and merging it with the NGMDB’s Geoscience Map Catalog, thereby greatly expanding its utility. During this time of apparent hiatus, data has been continuously compiled, and updates will be made later this year. With that update, we’ll begin to provide links to ~250,000 scanned images of the U.S. Geologic Names Committee notes and index card catalogs. These images are being managed as part of the NGMDB’s archive of scanned images, which also includes geologic maps and reports dating back to the 19th century. In addition to efficiencies gained with a single data management system, this has the important benefit of linking the publication with the unpublished information behind it, thereby providing context and insight.

RECONSIDER BEFORE DISCARDING PRINT JOURNALS: AN ANALYSIS OF THE EFFECTIVENESS OF ELSEVIER'S JOURNAL BACKFILES IMAGE RESCANNING PROJECT

JOSEPH, Lura E.
Library, University of Illinois at Urbana-Champaign
220A Natural History Building, MC102
1301 West Green Street
Urbana, IL 61801
luraj@illinois.edu

Abstract - During 2006-2009, Elsevier conducted a rescanning project to correct image problems in their digital journal backfile collections. The author examined 35 titles in the Earth and Planetary Sciences backfile package to evaluate the effectiveness of the rescanning project. The rescanning project corrected a substantial amount of image problems, however the years 1995-1998 were not included in the project, and therefore still contain many unacceptable images. In addition, the algorithm that was used did not identify problem line drawings such as maps, graphs, and charts, therefore a noticeable number of low quality line drawings remain throughout the Elsevier backfile collections.

PART 2: GSA Poster Session No. 263

(Joint GeoInformatics/GSIS)

GeoInformatics in Action

Poster Papers and Abstracts

October 12, 2011

ACCESSING TWO CENTURIES OF SCIENCE, THROUGH THE NATIONAL GEOLOGIC MAP DATABASE

SOLLER, David R.
U.S. Geological Survey
926-A National Center
Reston, VA 20192
drsoller@usgs.gov

WARDWELL, Robert C.
U.S. Geological Survey
1300 SE Cardinal Ct.
Building 10, Suite 100
Vancouver, WA 98683

and

STAMM, Nancy R.
U.S. Geological Survey
926-A National Center
Reston, VA 20192

Abstract - The U.S. Geological Survey and the Association of American State Geologists are mandated by Congress to provide a National Geologic Map Database (NGMDB, http://ngmdb.usgs.gov/) of standardized, spatial geoscience information. In this partnership, collaboration occurs with the private sector, universities, and geological survey agencies in other countries. While working together on this Database and the standards that support it (http://ngmdb.usgs.gov/lnfo/standards/), the state geological surveys and USGS have improved their ability to deliver geologic maps and related products to their users.

The NGMDB system is a hybrid -- some aspects are centralized and some are distributed, with the map information held by various cooperators. At the NGMDB website, users can browse and query the U.S. Geologic Names Lexicon (GEOLEX) and the Geoscience Map Catalog (containing citations and links to >87,000 publications by >630 publishers, many containing GIS data and map images), and obtain access to the source information wherever it resides. The NGMDB project is now engaged in a major effort to redesign the underlying database and the Web interface, in order to provide better access to a wider array of geoscience information. In particular, we are focusing on creating, managing, and delivering scanned images of geologic maps, the U.S. Geologic Names Committee notes and index card catalogs, and unpublished paleontologic and other reports. Some of this content, both published and unpublished, is from the 19th century, and represents a fascinating and informative resource for future scientific studies.

SUBJECT LIBRARY WEB PAGES: UNIQUENESS AND CONTINUITY ACROSS THE LIBRARY'S WEBSITE

Robert L. Tolliver and Joshua D. Wilkins
Fletcher L. Byrom Earth and Mineral Sciences Library
The Pennsylvania State University
rlt17@psu.edu

Abstract - Large university libraries are often divided up into separate subject libraries with web pages that address the unique needs of their user groups. Ideally, subject libraries need the flexibility to develop their sites to best suit their users, while maintaining sufficient uniformity across all library web pages so that users, especially those new to the university, can readily and consistently find information throughout the library's website.

Recently, the Penn State University Libraries addressed this issue of subject library flexibility and overall university library branding by developing a new subject library template. The Library brought together a Subject Template Hot Team to develop recommendations and requirements for the template. The final template design maintained the university look and navigation features, while giving the subject libraries their own identity and the flexibility they need through modular components that allow for unique content such as news feeds, audio/visual content, and new book feeds.

The Penn State Earth and Mineral Sciences Library (EMSL) has been a part of the template development and testing process, and the library's website is used here to demonstrate some of the features of the new subject library template.

INTRODUCTION

Library websites serve as the primary access point for users today. In large university libraries with multiple subject/branch libraries, the individuality of the subject/branch libraries must be balanced with the benefits of providing a coherent and familiar web interface across the whole library website. To meet these two potentially conflicting needs, the University Libraries at Penn State are in the process of developing a web template for the subject library's home pages.

BACKGROUND AND EVOLUTION OF THE LIBRARY WEBSITE

Prior to fall 2008, the libraries' website (Figure 1) was very text heavy, lacked visual interest, and could be difficult to navigate. The library decided to redesign the website and began with usability testing in 2009 which confirmed some of the navigation and text-related issues that we had inferred from user input and library staff experience. Some preliminary changes were made with the libraries move to a new content management system (Figure 2).

The next step was to develop, with the aid of an independent web design consultant, a new model template that employed the usability testing data and other information that the library had gathered. Additional usability tests were conducted throughout the development process, which focused on the main library home page and the general structure of the other library web pages. The redesigned University Libraries website (Figure 3) was released for fall 2010.

The new website received favorable feedback from users and has successfully addressed some of the most

Figure 1. An example of the home page of Penn State's Fletcher L. Byrom Earth & Mineral Sciences Library during the period of 2001-2008

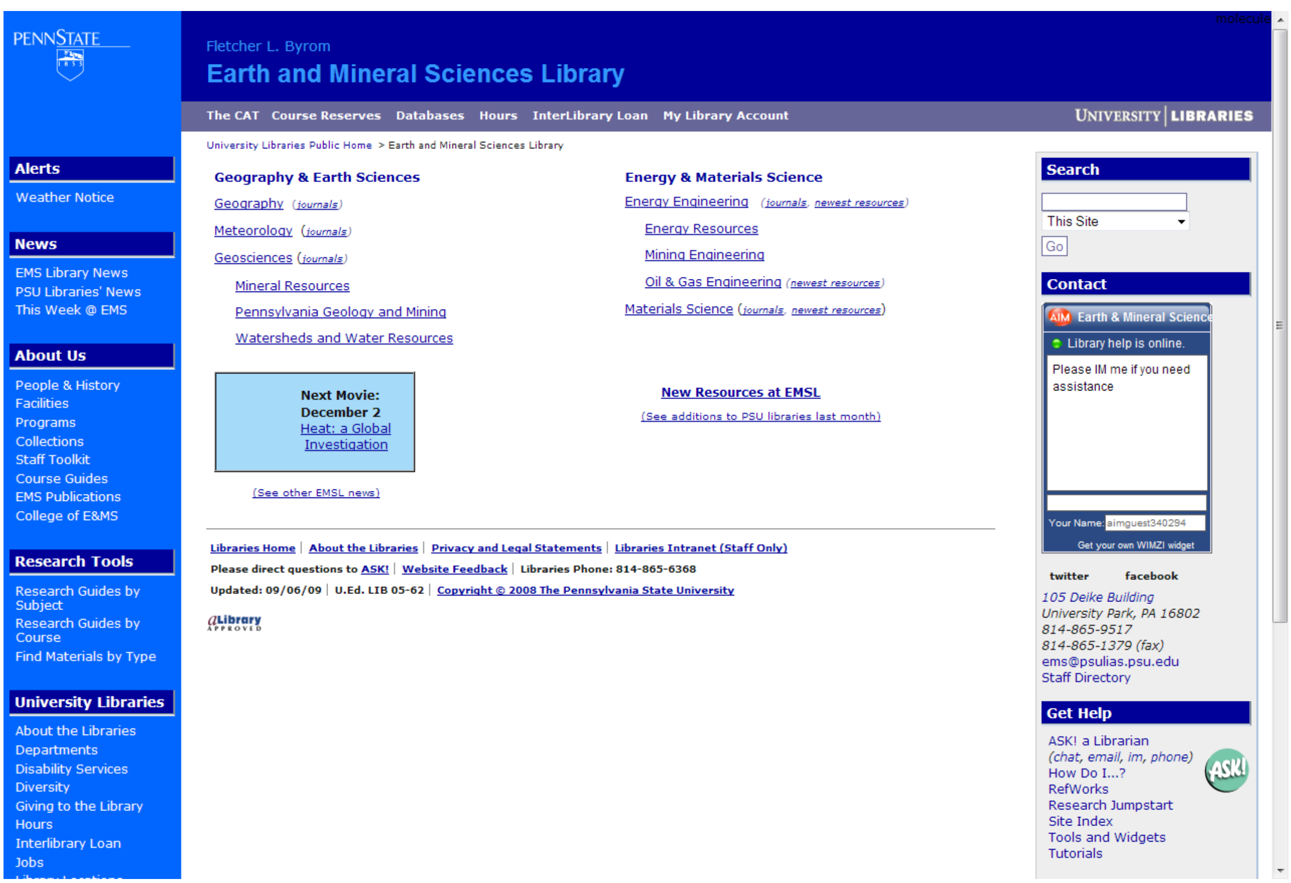


Figure 2. The Fletcher L. Byrom Earth & Mineral Sciences Library home page, 2008-2009

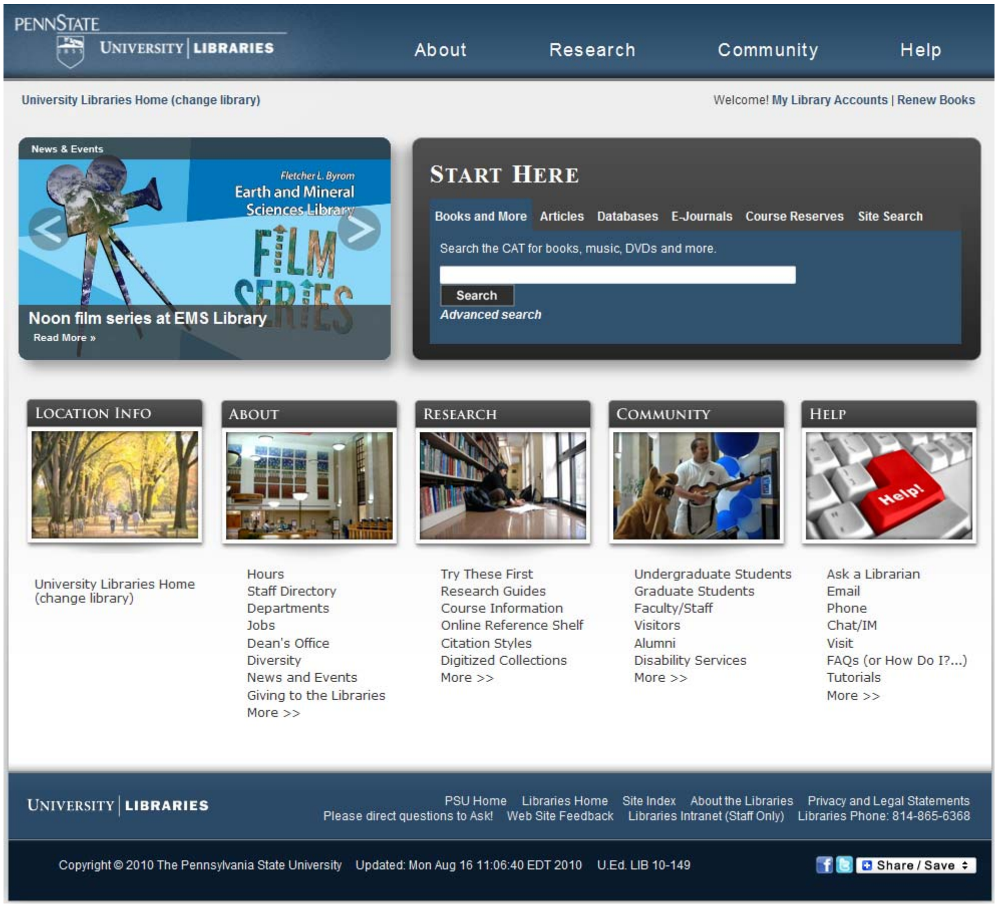


Figure 3. The Penn State University Libraries home page, 2010-2012

Figure 4. The Fletcher L. Byrom Earth & Mineral Sciences Library home page, 2010-2012

significant website issues. One area of concern, however, was the subject library home pages which act as the subject specific “home pages” for their users. The EMSL page was incrementally redesigned to accommodate the new template design (Figure 4), but the resulting web pages from across the subject libraries were inconsistent and disordered.

SUBJECT LIBRARIES TEMPLATE HOT TEAM

In the fall of 2010, a team was charged with developing a plan for revising the subject libraries home pages, identifying problems that needed to be addressed, and making recommendations for a new subject library template. The team identified two important guiding principles for developing the new template:

- Priority of content: most important content on main page, less important content to next level pages
- Focus: Websites should be user-centered, not a crutch for librarians

To aid in the development and implementation of a new subject libraries template, a second Subject Libraries Template Hot Team was charged to:

- Provide feedback to the web designer in the development of the subject libraries template
- Select a finalized design to present to the Web Steering Committee as a recommended template
- Provide consultation to individual subject libraries regarding revised home pages
- Propose a plan to transfer content to the new design

This second team took the original group’s recommendations and developed templates using the EMS Library and a couple of the other subject libraries as test sites. The templates were sent to the designer to create mockups of the website. This iterative process continually tweaked the site within the constraints of the overall website design until a template design was reached that met the needs of the subject libraries. These designs are divided into three main sections within the University Libraries’ website framework (Figure 5):

- A masthead or multi-image slider that serves as an identifier for the particular subject library (Figure 6)
- A horizontal text box that can be used for a welcome message or other content
- A section of modular components that can include resources, news feeds, new materials, computer availability, podcasts, or other content (Figure 7)

DEVELOPMENT OF THE EARTH & MINERAL SCIENCES LIBRARY SUBJECT LIBRARY TEMPLATE

The final template was applied to the EMSL home page (Figure 8). A multi-image slider at the top highlights current events in the branch library. A short welcome message is used and the modular components highlight the library’s resources, new materials, and EMS Library news via a Twitter feed.

NEXT STEPS

The University Libraries plans to implement the new subject library templates during the summer term 2012. The University Libraries’ Information Technology department has completed the development of most of the modular components for the template and expects to have these ready for implementation this summer. The Subject Library Template Hot Team is developing workshops to instruct subject library staff on the features of the new templates, guide them in migrating content, and consult with them throughout the process.

CONCLUSION

The development of the subject library template will provide continuity across the libraries websites for the benefit of users while providing the individual subject libraries with the opportunity to maintain and promote the unique identity and content that will best serve user needs in their subject areas.

ACKNOWLEDGEMENTS

We would like to acknowledge the work of the other members of the Subject Libraries Template Hot Team, including Timothy Auman, Daniel Hickey, Ashoo Kumar, and Russ Souchak. Also, thanks to Binky Lush for her help in addressing technical issues and for serving as our liaison to the web designer. Thanks also to Linda Musser for her guidance in this project.

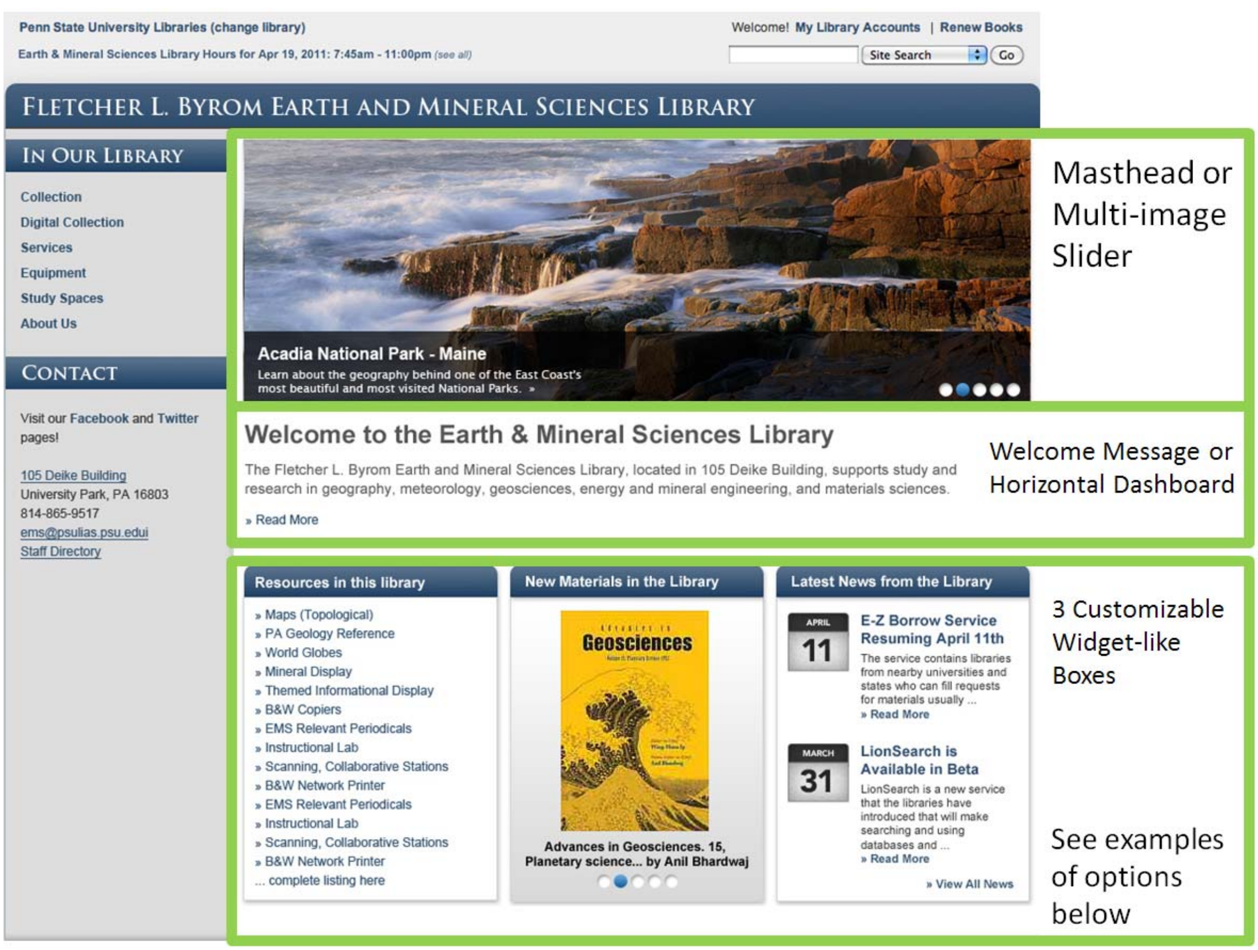


Figure 5. The three main sections of the subject libraries template. The top and left navigation areas are persistent across all of the library's web pages

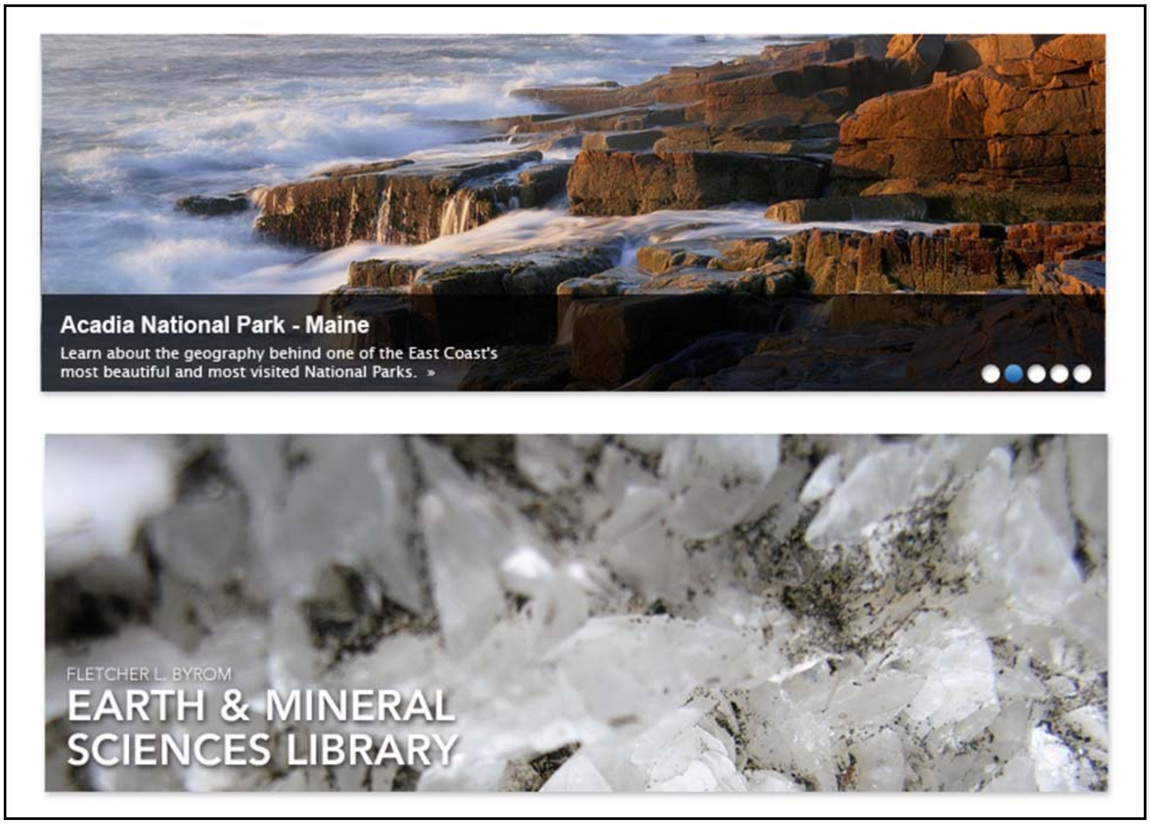


Figure 6. Examples of the multi-image slider and masthead image for the subject libraries template

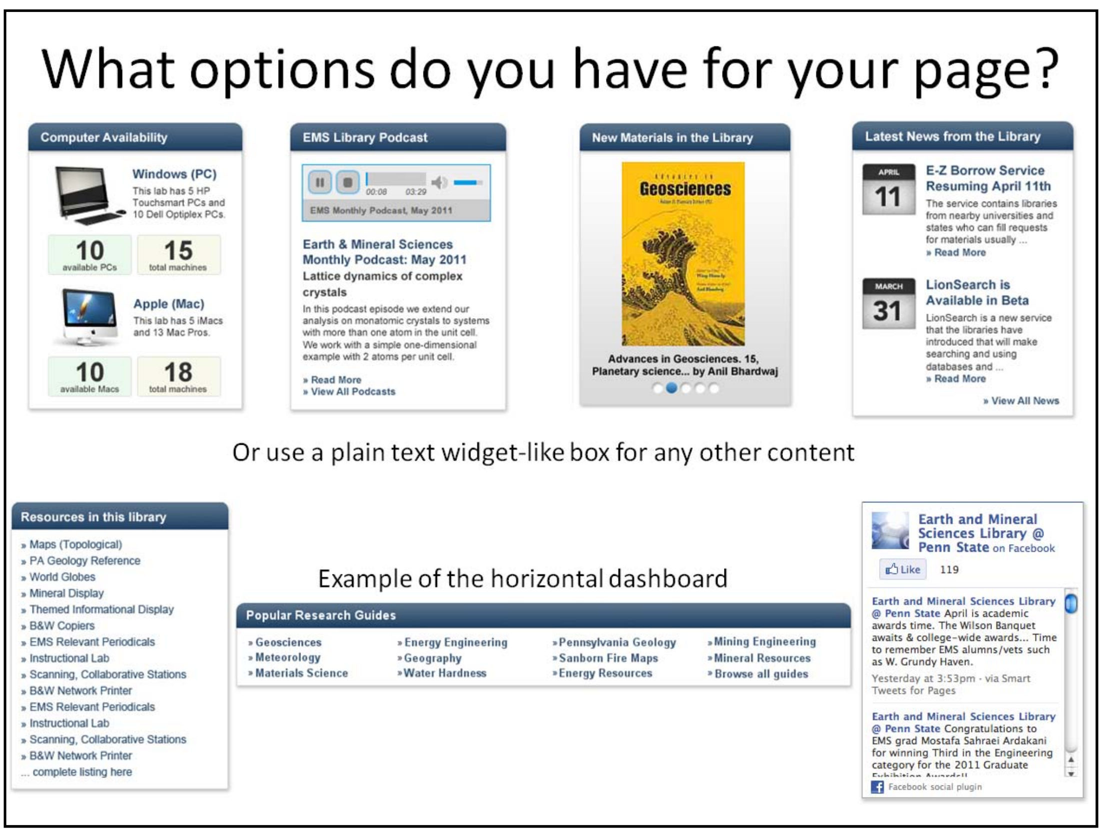


Figure 7. Examples of possible modular components and the horizontal text box (dashboard) that can be included on the subject libraries template

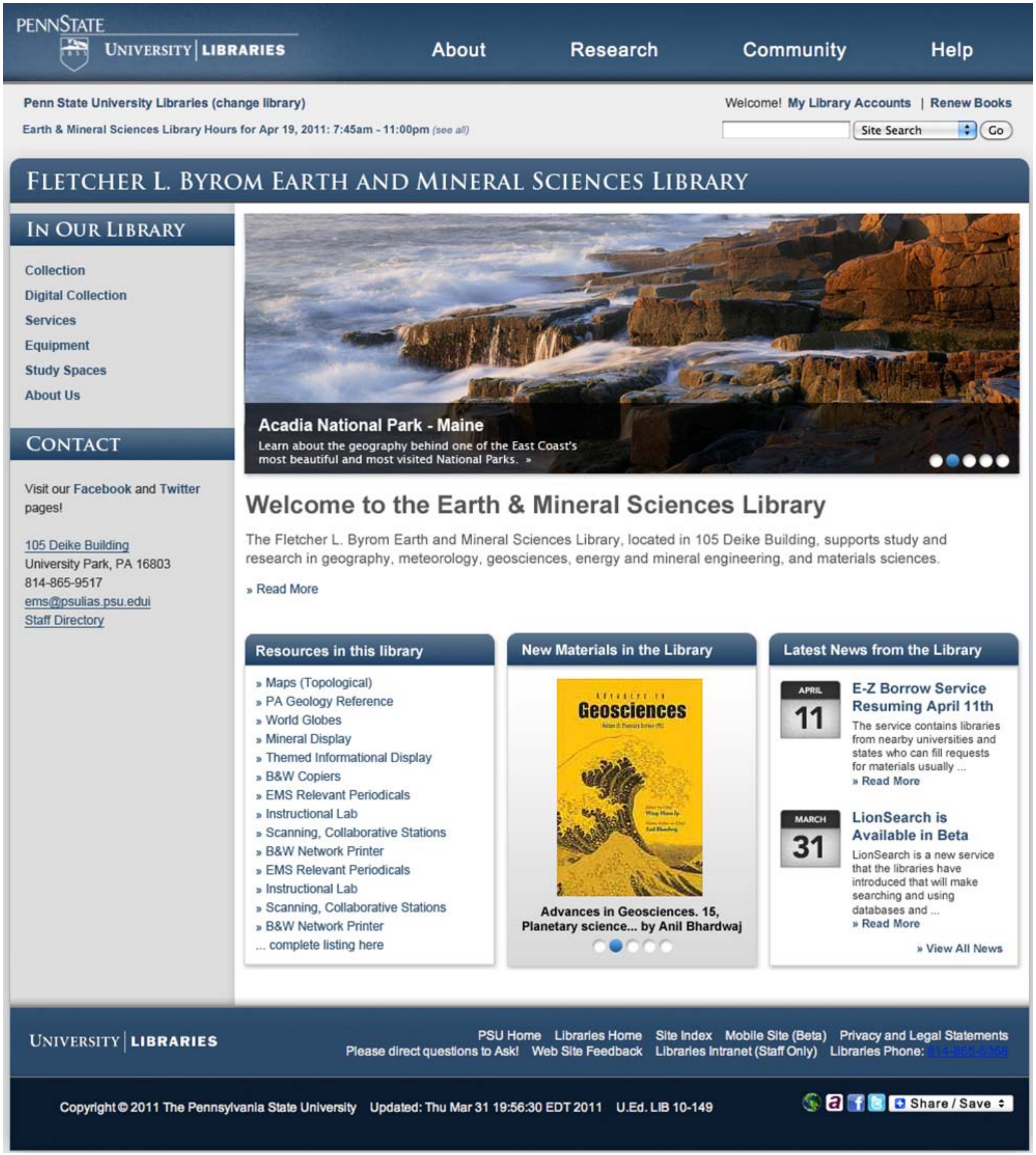


Figure 8. The final subject libraries template applied to the Fletcher L. Byrom Earth & Mineral Sciences Library home page, 2012

REFERENCE SOURCES AND DATABASES FOR WILDERNESS AND OTHER PROTECTED AREAS

John D. Kawula
Rasmuson Library
University of Alaska
P.O. Box 756817
Fairbanks, AK 99775
john.k@alaska.edu

Abstract - Geoscientists, land resource managers, and students often require literature pertaining to wilderness and other protected areas. Identifying and locating these areas, their management category, usage restrictions, and summary characterizations are important components of this research. Several handbooks and databases consolidate wilderness classifications, descriptions, and data, and provide rudimentary cartographic portrayal. Brief descriptions of major international, U.S., Canadian, and Australian sources are presented. In addition, websites of several environmental advocacy organizations that add substantially to these sources are noted.

Poster presentation based on the author's "A Guide to Locating Wilderness Area Literature". Western Geography, 17/18/19 (2007, 2008, 2009), pp. 78-96. Available as a full text open source journal article:

http://www.geog.uvic.ca/dept/wcag/kawula.pdf

INTRODUCTION

The idea and practice of selectively protecting natural areas and restricting their use is centuries old. In recent decades this practice has become more systematic with international guidelines for management categories, legal sanctions from a multiplicity of political jurisdictions, public / private cooperative efforts, and assertive strategies from advocacy and non-governmental organizations.

Geoscientists, land resource managers, students and the general public often seek literature pertaining to wilderness and other protected areas. Identifying and locating these areas, their management category, usage restrictions and summary characterizations are often the initial steps in this research.

In 1962 the First World Conference on National Parks initiated formal record keeping and information systems for protected areas. In 1978 the International Union for Conservation of Nature (IUCN) adopted a classification system for these areas. The current revision took effect in 1994. The most restrictive IUCN categories, Ia (strict nature reserves, managed mostly for scientific research), and Ib (wilderness areas, managed mostly for wilderness protection) should be of particular concern to geoscientists.

Several important handbooks, guides, databases, and internet sites consolidate descriptions, data, and provide rudimentary cartographic portrayal of these areas.

REFERENCE HANDBOOKS, ETC.

Excellent explanations of the IUCN system, protected area networks throughout the world, and current issues regarding their management are provided by:

- Chape, S., Spalding, M., and Jenkins, M., (Eds.). (2008) The *world's protected areas: Status, values, and prospects in the 21st century*. Berkeley: University of California Press.

Other important sources (many are somewhat dated but still useful)

- Allin, C. (Ed). (1999). *International handbook of national parks and nature reserves*. New York: Greenwood Press.
- Crawford, M. (1999). *Habitats and ecosystems: An encyclopedia of endangered America*. Santa Barbara, CA: ABC-CLIO.
- Dearden, P. and Rollins, R. (Eds.). (2008). *Parks and protected areas in Canada: Planning and Management*. (3rd Ed.). Don Mills, Ont.: Oxford University Press.
- Foreman, D., and Wolke, H. (1992). *The big outside: A descriptive inventory of the big wilderness areas of the United States* (Rev. ed.). New York: Harmony Books.
- Kormos, C.F. (2008). *A handbook on international wilderness law and policy*. Golden, CO: Fulcrum Press.
- *The National Atlas of the United States of America. National Wilderness Preservation System*. (2004). Scale 1:5,000,000. Reston, VA: U.S. Geological Survey.
- Tilton, B. (1996). *America's wilderness: The complete guide to more than 600 national wilderness areas*. San Francisco: Foghorn Press.
- *United Nations list of protected areas*. (2003). Gland, Switzerland: International Union for Conservation of Nature.

MAJOR DATABASES

International

World Database on Protected Areas
http://www.wdpa.org
(A joint project of IUCN and UNEP) "… the most comprehensive global spatial dataset on marine and terrestrial protected areas available." The mapping, searching and downloading has been moved to The Protected Planet at:
http://protectedplanet.net

United States

The Protected Areas Center
http://databasin.org/protected-center
Part of the Data Basin Center (an interdisciplinary collaboration coordinated by the Conservation Biology Institute) Sub-files include: Protected Areas Database – US, Marine Protected Areas Inventory & National Conservation Easement Database

Wilderness.net
http://www.wilderness.net
An officially recognized federal interagency database of wilderness area descriptions, data, legal and policy documents maintained at the University of Montana

Canada

Conservation Areas Reporting and Tracking System (CARTS)
http://www.ccea.org/en_carts.html
Maintained by the Canadian Council on Ecological Areas

Protected Areas of Canada
http://databasin.org/protected-center/features/canada
A sub-file of the Protected Areas Center produced in cooperation with Global Forest Watch Canada

Australia

National Reserve System
http://www.environment.gov.au/parks/nrs
Terrestrial areas, regardless of jurisdiction

National Representative System of Marine Protected Areas
http://www.environment.gov.au/coasts/mpa/nrsmpa
Marine areas nation-wide

Collaborative Australian Protected Area Database (CAPAD)
http://www.environment.gov.au/parks/nrs/science/capad.html
Statistical, textual, and spatial database

SUPPLEMENTAL WEBSITES

The Wild Foundation
http://www.wild.org
A U.S. based organization promoting international wilderness protection Includes full text of the World Wilderness Congresses plus archive copies of the International Journal of Wilderness

Canadian Parks and Wilderness Society
http://www.cpaws.org

National Parks Conservation Association
http://www.npca.org

Nature Conservancy
http://www.nature.org

Wilderness Society
http://www.wilderness.org

PART 3: GSIS Meeting Supplemental Materials

2011 Annual Meeting

Minneapolis, Minnesota

October 8-12, 2011

GEOSCIENCE INFORMATION SOCIETY
SCHEDULE OF EVENTS

Note: GSIS Committees met separately as arranged by committee chairs

		Location
Saturday, October 8		
9:15a.m.–4:45p.m.	Geosciences Librarianship 101	Minneapolis Community & Technical College Library, Room 1500
3:00 –5:00 p.m.	GSIS Executive Board Meeting	Hilton Forum Suite
5:00 –7:00 p.m.	Early Bird No-Host Dinner and Newcomers Meet-n-Greet	Joe's Garage Restaurant 1610 Harmon Place
Sunday, October 9		
9:00 a.m. -12:00 p.m.	GSIS Business Meeting	Hilton, Marquette Ballroom I
1:30 –5:30 p.m.	T195. Data Preservation and Management in	Convention Center 101DE
Monday, October 10		
12:00 -1:30 p.m.	GSIS Luncheon and Awards (ticketed event)	Hilton, Red Wing Room
1:30 -3:30 p.m.	GSIS Professional Issues Roundtable	Hilton, Symphony Ballroom I
3:45-5:30 p.m.	Mall of America -informal field trip	Meet in Hilton lobby at 3:45pm
Tuesday, October 11		
9:30 –11:30a.m.	GSIS Field Trip to Mill City	Mill City Museum
1:30-3:30 p.m.	GSIS Information Resources/Vendor Update	Hilton, Red Wing Room
6:00 -9:00 p.m.	GSIS / GSA Geoinformatics Division Joint Reception	Hilton, Marquette Ballroom I
Wednesday, October 12		
8:00 a.m. -12:00 noon	T191. Printed Past, Digital Future—We Hold the Key	Convention Center 101DE
2:00 - 4:00p.m. (posters up 9 a.m. – 6 p.m.)	T 196. Poster Session Geoinformatics in Action!	Convention Center Hall C

GEOSCIENCE LIBRARIANSHIP 101: A SEMINAR PRESENTED BY THE GEOSCIENCE INFORMATION SOCIETY

Saturday, October 8, 2011
Minneapolis Community and Technical College Library, Room 1500
Phone: 612-659-6290

Workshop overview

9:15- 9:30 AM	Check-in/Welcome and Introductions: (Moderator: Jan Heagy, Exxon Mobil Upstream Research Company)
9:30-10:30 AM	Reference: (Instructor: Lura Joseph, University of Illinois, Champaign-Urbana
10:30 -10:45	Break
10:45-11:45 AM	Instruction: (Instructor: Adonna Fleming, University of Nebraska-Lincoln)
11:45 – 12:45 PM	Collection Development: (Instructor: Lisa Dunn, Colorado School of Mines)
12:45-1:45 PM	Lunch and networking
1:45-3:15PM	Maps: Collection Development and Reference (Instructor: Linda Zellmer, Western Illinois University)
3:15 – 3:30 PM	Break
3:30 – 4:30 PM	GIS and the Digital Future: (Instructor: Linda Zellmer, Western Illinois U)
4:30 – 4:45 PM	Feedback and wrap-up: (Moderator: Jan Heagy, Exxon Mobil Upstream Research Company)

GeoScience Information Society
Annual Business Meeting
October 9, 2011
Hilton Minneapolis, Marquette Ballroom 1

1. Call to order (Kay Johnson) Came to order at 9:06 AM, 31 in attendance (Michael Noga, John Hunter, Amanda Bielskas, Marie Dvorzak, Thelma Thompson, Hannah Winkler, Lisa Dunn, Joanne Lerud-Heck, Linda Zellmer, Cynthia Prosser, Louise Deis, Lisa Johnson, Ellie Clement, Paula Rucinski, Dona Dirlam, Adonna Fleming, Rusty Kimball, Megan Sapp-Nelson, Richard Huffine, Lura Joseph, Jody Bales Foote, Dorothy McGarry, Dena Hanson, John Kawula, Kevin Lindstrom, Carol La Russa, Courtney Hoffner, Shaun Hardy, Claren Kidd, Jan Heagy)

2. Introduction of Executive Board
    President (Kay Johnson)
    Vice President , President-Elect (2011), Lisa Johnston
    Vice-President, President-Elect (2012), Linda Zellmer
    Secretary, Cynthia Prosser
    Treasurer and Treasurer Elect, Angelique Jenks-Brown
    Immediate Past-President, Jan Heagy
    Newsletter Editor, Janet Dombrowski
    Publications Manager, Ellie Clement

3. Welcome and General Introductions
    Welcome to Minneapolis
    There are opportunities to volunteer:
        especially at our booth (#402)
        Need coverage at the booth during Luncheon and the Technical Session
        Need a Newsletter Editor & website manager
        Jim O'Donnell is seriously ill, has resigned his position on GSA pub committee
        Need a technical session convener for next year
        Need a publications manager to be mentored by Ellie Clement.
    After Welcoming remarks by Kay Johnson, everyone introduced themselves
    Thank you to the Board and Committee chairs for all their hard work.

4. Approval of the Agenda – Jan Heagy 1st, John Hunter 2nd, passed by members

5. Approval of the Annual Business Meeting Minutes (October 31, 2010)
    Michael Noga 1st
    Linda, Ellie, Jan – 2nd
    Passed and approved by the membership

6. Reports
    GSIS General – Kay Johnson
        3 executive board teleconferences (new trend), Jan & Lisa arranged, Cynthia and Jan took minutes. Thanks to the whole board and the committees, Jan has been a wonderful mentor, Lisa has done so much, Angelique has done a great job on the finances

    Treasurer's report
    3rd quarter report in newsletter
    Conference expenses not completed yet
    Big thank you to Lisa for getting all the sponsors
    Started a credit card – a big help
    PayPal account – looking into getting one for the society
        Volunteer to help – Rusty

    2011 Conference – Lisa Johnston
        Get sponsorship
        Solicited 60 vendors, many surprised librarians would be attending GSA
        6 agreed to sponsor
            The Geological Society – Professional Issues Roundtable
            AGU- business meeting

GeoScience World – Geo 101
AAPG- Joint reception with Geoinformatics
Eastview Cartographic – luncheon/awards ceremony
Springer - Technical Session/Posters
Sponsors invited to speak at the Information Resources vendor update
GSIS hosting several events during the conference
Geoscience Librarianship - Geo101 (15 participants)
Business meeting,
Luncheon (43 regular ticks, 4 student) – will be presenting awards at the luncheon
Professional Issues roundtable, refreshments
Vendor updates – Tuesday
Joint reception w/ GeoInformatics
Technical session Wed.
Joint poster session with GSA Geoinformatics Division
No host dinner at Joe's garage, follow up with notes to participants (20), very successful
Mill City Museum (15 signup) 10 AM meet in Hilton lobby, if you are not signed up, please join us
Mall of America – informal trip , meet in Hilton lobby
Big thanks to all the sponsors
Is there a volunteer who lives near Charlotte? -Kay will be willing to work with someone
Archives – nothing, short report in Newsletter
Exhibits – Dona
Appreciate help in the booth, please join our committee or if you have any ideas - please come talk with us after the meeting
Membership – no current committee chair
Best Paper Award – to Jody Foote Paper: "State Geological Survey Libraries: A Disparity in Resources, Services, Access, and Professionalism" in Science & Technology Libraries, 29: (1/2), 2010, p. 53-68.
Best Reference Work – to Geoffrey Davies The Mantle of Convection for Geologists, Cambridge University Press, 2011
Distinguished Service Award – to Claren Kidd
Award Certificates – Jim unable to produce them this year, Kay did them
Guidebooks – Lura Joseph
3 members distributing to field trip leaders, we would like the Exec. Board to consider money to purchase guidebooks for review.
Best Guidebook Award - Fassett, James E.; Zeigler, Kate E.; and Lueth, Virgil (editors). Geology of the Four Corners Country. Socorro, NM: New Mexico Geological Society, Guidebook 61, 2010
A panel is in the booth with the awards
Website – has been updated, have you seen it? Have received lots of positive feedback: www.geoinfo.org
Information Resources – Kay, John, Lisa did all the work, sponsors will be speaking about their information products
Nominating – Jan Heagy
First electronic ballot
Used SurveyMonkey to administer the election
The election was successful
Can use survey monkey again for the election and for any other polling needs
Results: Linda Zellmer: Vice-President and Angelique Jenks-Brown: Treasurer - Congratulations.
Preservation – no committee and no volunteers
International Initiatives – no committee chair, no auction this year
GeoNet Moderator – Louise Deis
384 members total
6 months searchable archives
Members from 22 countries
Get breakdown from Louise, if you are interested
Lura – any way to contact the list membership and let them know about GSIS membership? Agreed that it was a good idea
Elaine – problem with paying with US dollars due to cost of cutting a check in US dollars at foreign banks, PayPal should alleviate some of that problem.
Newsletter Editor –
Janet Dombrowski is resigning, but will continue through the end of the year (2011)
Bonnie Swoger is very interested but wants to speak with Janet first
Moving to a quarterly publication schedule next year

GSIS INFORMATION RESOURCES FORUM / VENDOR UPDATE

Tuesday, October 11, 2011

1:30 -3:30 p.m.

Hilton, Red Wing Room

1:30 –- **Welcome/Introductions**

1:40 – **Geology Society of London**
Neal Marriott, Director of Publishing

1:55 – **American Geophysical Union**
Mary Warner, Assistant Director for Institutional Marketing

2:10 – **American Association of Petroleum Geologists**
Ron Hart, AAPG Databases Manager

2:25 – **Springer**
Johanna Schwarz, Publishing Editor, Geosciences

2:40 – **East View Cartographic, Inc.**
Jerod Fink, Account Manager; Tony Monsour, GIS Developer and Sales Associate

2:55 – **GeoScience World**
Lauren Marley, Marketing & Communications Specialist; Alexandra Vance, Executive Director

3:10 – **Q&A and Open Discussion**

3:30 – **End**

Thanks to all of the presenters, who are also GSIS Annual Meeting sponsors.

GSIS INFORMATION RESOURCES FORUM / VENDOR UPDATE REPORT

Tuesday, October 11, 2011
Moderated by Kay G. Johnson

Five vendors spoke about their products:

Neal Marriott, Director of Publishing, spoke for the Geological Society of London. The Geological Society migrated to a HighWire interface from Ingenta in 2008. The Society recently began offering access to their Archives to researchers. Elsevier has partnered with the Geological Society to index cartographic content with Elsevier's *Geofacets* map discovery tool. The Lyell collection is searchable with the *Geofacets* tool.

Mary Warner, Assistant Director for Institutional Marketing, stressed that the American Geophysical Union is now actively working with librarians and publishers, and is trying hard to overcome their reputation as being difficult to work with. Contrary to previous reports, AGU still publishes journals in print. They are also now selling to consortia. Content is hosted on AGU servers and is available through Portico.

Among the new initiatives from Springer are *SpringerBriefs* (publications around 100 pages or so between the size of a journal article and a book) -and *Springer Theses*. Springer gave attendees sample copies of both. Johanna Schwarz, Geosciences Publishing Editor, demonstrated Springer's freely available Web services: *AuthorMapper* (plots locations of authors on map), journal suggest, and *SpringerImages*. Springer also provides open access books. Springer is the largest STM book publisher.

East View Cartographic, Inc. is based in Minneapolis and is the world's largest repository of metadata. Jerod Fink, Energy & Natural Resources Account Manager, and Tony Monsour, Academic & Library Account Manager & GIS Developer, described their company as having all of the world's map data. They have been able to obtain map data from countries that other companies and agencies have found challenging to work with. East View offers Geospatial Web Services with raster, vector, and index map data. They also have a cartographic approval plan.

Lauren Marley, Marketing & Communications Specialist, discussed upcoming migration of GeoScienceWorld (GSW) to HighWire's H20 platform which will offer more features than the current platform. WebEx training will likely be offered. GSW started OpenURL linking in July, and recently started a quarterly newsletter. Lauren mentioned some researchers with individual subscriptions have run into problems accessing GSW. It is suspected the problems are related to an IP conflict between the personal subscription and the institutional GSW subscription. The problem will likely be resolved if the researcher clears the computer's cache before trying to access GSW. Alexandra (Alex) Vance, GSW Executive Director, also attended the meeting and answered some questions.

The Geoscience Information Society is thankful to all of the vendors for sponsoring meetings at the conference in Minneapolis.

GEOSCIENCE INFORMATION SOCIETY AWARD WINNERS 2011

Mary B. Ansari Distinguished Service Award
Claren M. Kidd
Geology Librarian and Professor of Bibliography (Retired)
L. S. Youngblood Energy Library
University of Oklahoma

Mary B. Ansari Best Geoscience Reference Work Award
Dr. Geoffrey Davies
Research School of Earth Sciences
The Australian National University
E-mail: Geoff.Davies@anu.edu.au
For his book *Mantle Convection for Geologists,* published by Cambridge University Press, 2011

Best Website Award
Dr. John G. Spray, Director
E-mail: jgs@unb.ca
Planetary and Space Science Centre
Department of Earth Sciences
University of New Brunswick
Canada
For the website *Earth Impact Database (EID)*
http://www.passc.net/EarthImpactDatabase/index.html

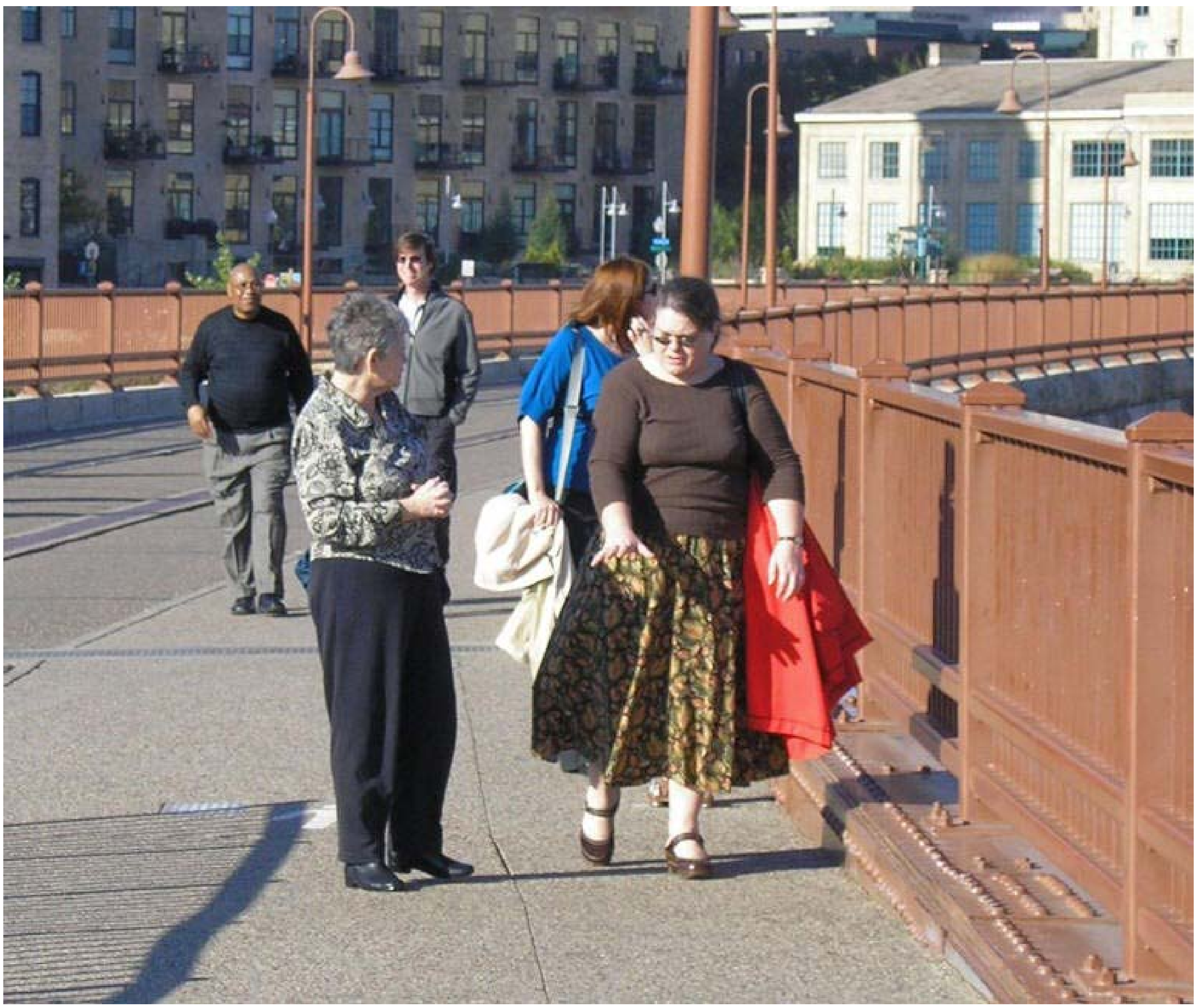
Best Paper Award
Jody Bales Foote
Associate Professor and Geology Librarian
Youngblood Energy (Geology) Library
University of Oklahoma
E-mail: jbfoote@ou.edu
For her paper “State Geological Survey Libraries: A Disparity in Resources, Services, Access, and Professionalism”, *Science & Technology Libraries*, 29: (1/2), 2010, p. 53-68.

Best Guidebook Award
James E. Fassett, Kate E. Zeigler, and Virgil Lueth
New Mexico Geological Society
Editors
For their book *Geology of the Four Corners Country*. Socorro, NM: New Mexico Geological Society, Guidebook 61, 2010.

GSIS FIELD TRIP REPORT

Mill City Museum
Minneapolis Waterfront
October 11, 2011
by Kay Johnson

About 15 GSIS members toured the Mill City Museum on the Minneapolis Waterfront on Tuesday during the conference. The museum is built into the ruins of the Washburn A Mill, which once was the largest and most technologically advanced flour mill in the world. We took the eight floor elevator ride that went up and down between floors showing the history of the mill and ended up on the top floor where the balcony provided spectacular views of the Mississippi and Minneapolis. Before heading to the gift store, we saw the entertaining film, "Minneapolis in 19 Minutes Flat." Thanks to Lisa Johnston for making all of the tour arrangements!



Jan Heagy and Cynthia Prosser (front), Lisa Johnston (middle), John Hunter and Rusty Kimball (behind) on the sidewalk of the old Stone Arch Bridge in Minneapolis.

Lisa Johnston, Carol La Russa, and John Hunter on the Stone Arch Bridge, Minneapolis.

GSIS members and others on the balcony at the Mill City Museum.


View of the Mississippi River, St. Anthony Falls and Lock from the Mill City Museum balcony.

All photos by Kay Johnson

AUTHOR INDEX