DLF
DIGITAL LIBRARY FEDERATION

SPRING FORUM 2006

THE DRISKILL HOTEL
AUSTIN, TX

APRIL 10 – 12, 2006

Washington, D.C.

CONTENTS

ACKNOWLEDGMENTS

DLF Forum Fellowships for Librarians New To the Profession

The Digital Library Federation would like to extend its congratulations to the following for winning DLF Forum Fellowships:

- Erika Farr, Digital Text Projects Manager, *Emory University*
- Theron Feist, Senior Information Technology Specialist, *The Johns Hopkins University*
- Christopher Hamb, Assistant Engineering Librarian and Assistant Professor of Library Administration, *University of Illinois at Urbana-Champaign*
- Anne Karle-Zenith, Special Projects Librarian, *University of Michigan*
- Emily Lynema, North Carolina State University Libraries Fellow, *North Carolina State University*

DLF Fellowship Selection and Program Committees

DLF would also like to extend our heartfelt thanks to the DLF Spring Forum 2005 Program Committee and Fellowship Selection Committee for all their hard work. They are as follows:

- Stephen Abrams, *Harvard University*
- Denise Troll Covey, *Carnegie Mellon University*
- Barrie Howard, *Digital Library Federation*
- Ann Lally, *University of Washington*
- Chris Ruotolo, *University of Virginia*
- David Seaman, *Digital Library Federation*
- Sarah Shreeves, *University of Illinois at Urbana-Champaign*
- Perry Willett, *University of Michigan*

SITE MAP

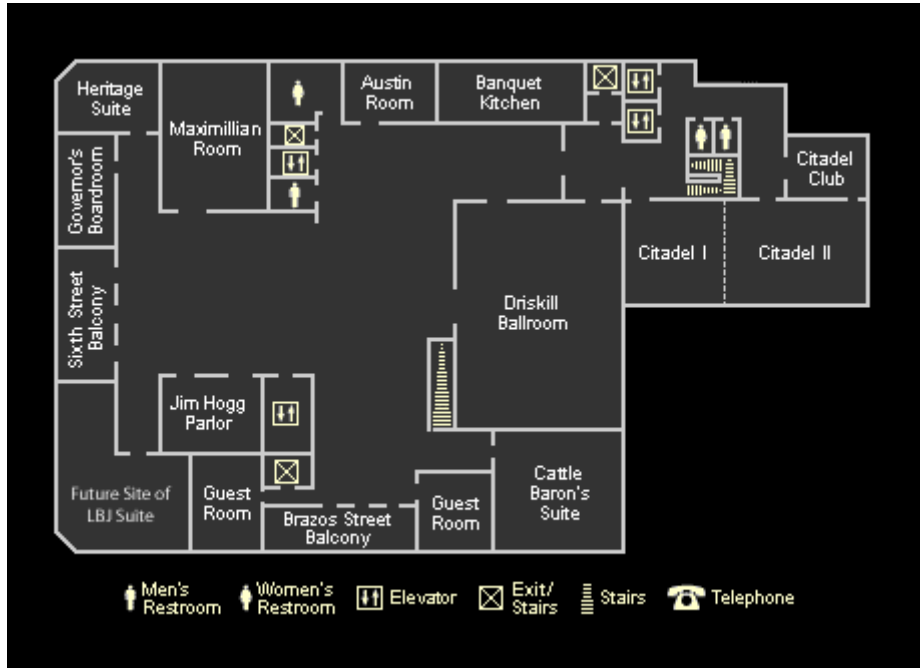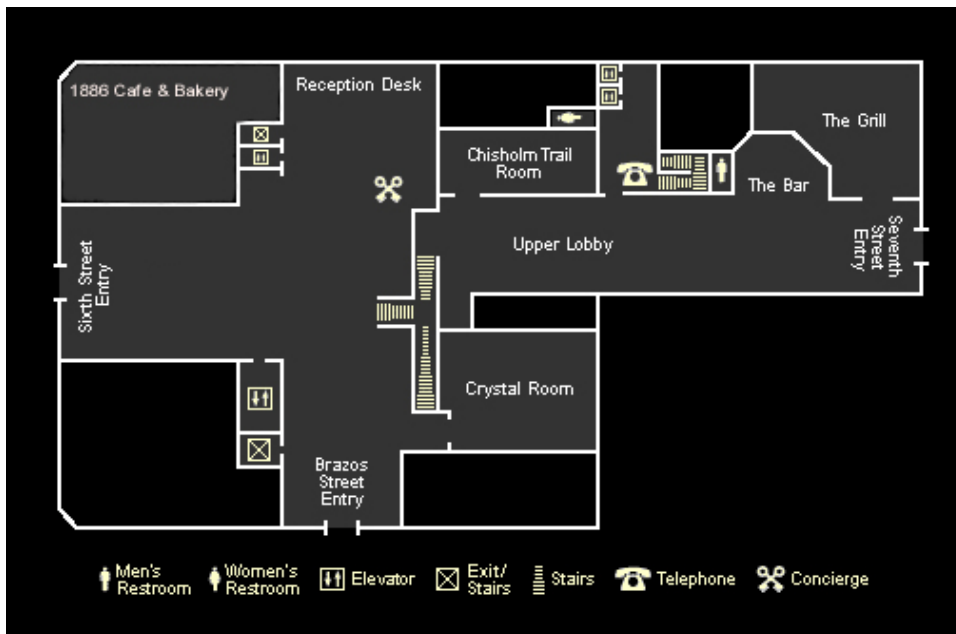Fig. 1. Site Map of the Mezzanine Level of The Driskill Hotel

Fig. 2. Site Map of the Lobby Level of The Driskill Hotel

SCHEDULE AT A GLANCE

PRECONFERENCE: MONDAY, APRIL 10, 2006

8:30ᴀᴍ–11:30ᴀᴍ   *DLF Aquifer Metadata Working Group Meeting—for project participants only* (Governor's Boardroom, Mezzanine Level)

8:30ᴀᴍ–11:30ᴀᴍ   *DLF Aquifer Services Working Group Meeting—for project participants only* (Maximilian Room, Mezzanine Level)

8:30ᴀᴍ–11:30ᴀᴍ   *DLF Aquifer Technology/Architecture Working Group Meeting—for project participants only* (Chisholm Trail Room, Lobby Level)

DAY ONE: WEDNESDAY, APRIL 10, 2006

10:30ᴀᴍ–10:30ᴘᴍ   *Registration* (Mezzanine Level)

11:30ᴀᴍ–12:15ᴘᴍ   *First-time Attendee Orientation* (Driskill Ballroom, Mezzanine Level)

12:30ᴘᴍ–12:45ᴘᴍ   *Opening Remarks* (Driskill Ballroom, Mezzanine Level)

1:00ᴘᴍ–2:30ᴘᴍ   *Session 1:* PANEL **"Developers' Forum Panel: Global Identifier Resolution."** (Driskill Ballroom Mezzanine Level)

1:00ᴘᴍ–2:30ᴘᴍ   *Session 2:* PANEL **"Implementing the PREMIS Data Dictionary."** (Citadel I and II, Mezzanine Level)

2:30ᴘᴍ–3:00ᴘᴍ   *Break* (Mezzanine Level)

3:00PM–4:30PM   *Session 3:* PANEL **"Libraries and Publishing— Reports from the Field."** (Driskill Ballroom, Mezzanine Level)

3:00PM–4:30PM   *Session 4:* PANEL **"The LC/NSF Digital Archiving and Long-term Preservation Research Program (Digarch): Results and Prospects."** (Citadel I and II, Mezzanine Level)

4:30PM–5:00PM   ***Break*** (Mezzanine Level)

5:00PM–6:30PM   *Session 5:* Metadata Strategies (Driskill Ballroom, Mezzanine Level)

    A. **"Development and Testing of Schema for Expressing Copyright Status Information in Metadata: Recommendations of the Rights Management Framework Group, California Digital Library."**

    B. **"Truth and Consequences, Texas: The University of Texas Libraries' Metadata Registry Project."**

    C. **"Sharing Resources by Collection: OAI Sets and Descriptions."**

5:00PM–6:30PM   *Session 6:* Dynamic Digital Environments (Citadel I and II, Mezzanine Level)

    A. **"The Evolution of a Digitization Program from Project Based to Large Scale at the University of Texas at Austin Libraries."**

    B. **"DAR: A Digital Assets Repository for Library Collections."**

    C. **"Contextualizing the Institutional Repository within Faculty Research."**

7:00PM–8:00PM　　*Posters* (Mezzanine Level)

1. **"Digital Imaging at the University of Texas at Austin."**

2. **"WolfPack: A Distributed File Conversion Framework."**

3. **"Navigating a Sea of Texts: Topic Maps and the Poetry of Algeron."**

4. **"Implications of the Copyright Office's Recommended Legislation for Orphan Works."**

7:00PM–9:30PM　　*Reception* (Mezzanine Level)

DAY TWO: TUESDAY, APRIL 11, 2006

8:00AM–9:00AM　　*Breakfast* (Mezzanine Level)

9:00AM–10:30AM　　*Session 7:* Managing Digital Library Content (Driskill Ballroom, Mezzanine Level)

A. **"Everything Old Is New Again: Repurposing Collections at the University of Michigan through Print on Demand.**

B. **"The Next Mother Lode for Large-scale Digitization?**

9:00AM–10:30AM　　*Session 8:* Remodeling Digital Library Systems (Citadel I and II, Mezzanine Level)

A. **"SRU: Version 1.2 and Beyond."**

B. **"Disambiguating Multiple Paths to Content Using RDF Triples."**

10:30AM–11:00AM　　*Break* (Mezzanine Level)

11:00AM–12:30PM   *Session 9:* PANEL **"Surfacing Consistent Topics Across Aggregated Resource Collections** (Driskill Ballroom, Mezzanine Level)

11:00AM–12:30PM   *Session 10:* Digital Archiving (Citadel I and II, Mezzanine Level)

    A. **"Archiving Courseware Websites to DSpace, Using Content Packaging Profiles and Web Services."**

    B. **"Video Preservation: The Truth Is Out There."**

    C. **"Automated Risk Assessment for File Formats."**

12:30PM–2:30PM   *Break for Lunch* [Individual Choice]

1:30PM–2:30PM   *Posters* (Mezzanine Level)

    1. **"Digital Imaging at the University of Texas at Austin."**

    2. **"WolfPack: A Distributed File Conversion Framework."**

    3. **"Navigating a Sea of Texts: Topic Maps and the Poetry of Algeron."**

    4. **"Implications of the Copyright Office's Recommended Legislation for Orphan Works."**

2:30PM–4:00PM   *Session 11:* PANEL **"DLF Aquifer: Bringing Collections to Light."** (Driskill Ballroom, Mezzanine Level)

2:30PM–4:00PM   *Session 12:* Tools (Citadel I and II, Mezzanine Level)

    A. **"The XML Submission Tool: A System for Managing Text Collections at Indiana University."**

    B. **"The Archivists' Toolkit: Streamlining Production and Standardizing Archival Information."**

4:00PM–4:15PM   *Break* (Mezzanine Level)

4:15PM–5:15PM   *Birds of a Feather (BOF) Session 1:*

1. **"DLF Aquifer MODS Implementation Guidelines: Overview/ Discussion of Comments and Changes."** (Driskill Ballroom, Mezzanine Level)

2. **"Global Identifier Resolution: Developers' Forum."** (Maximilian Room, Mezzanine Level)

3. **"Electronic Records Archives: Systems and Metadata Architectures."** (Austin Room, Mezzanine Level)

4. **"Update of Activities of the DLF Services Framework Working Group."** (Jim Hogg Parlor)

5:25PM–6:25PM   *Birds of a Feather (BOF) Session 2:*

1. **"DLF Aquifer MODS Implementation Guidelines."** [continued] (Driskill Ballroom, Mezzanine Level)

2. **"Archivists' Toolkit."** (Maximilian Room, Mezzanine Level)

3. **"DLF Inter-institutional Communication."** (Austin Room, Mezzanine Level)

4. **"Central Repository for a DL How-to."** (Jim Hogg Parlor)

DAY THREE: WEDNESDAY, APRIL 12, 2006

8:00AM–9:00AM   *Breakfast* (Mezzanine Level)

9:00AM–10:30AM   *Session 13:* Digital Library Services (Driskill Ballroom, Mezzanine Level)

A. **"Recommendations and Ranking: Experiments in Next Generation Library Catalogs."**

B. **"Unbundling the ILS: Deploying an E-commerce Catalog Search Solution."**

9:00AM–10:30AM   *Session 14:* Packaging and Performance
                        (Citadel I and II, Mezzanine Level)

   A. **"The Music Encoding Initiative (MEI)."**

   B. **"METS Profile Development at the Library of Congress: An Update."**

   C. **"Automated Generation of METS Records for Digital Objects."**

10:30AM–11:00AM   *Break* (Mezzanine Level)

11:00AM–12:30PM   *Session 15:* PANEL **"The Open Content Alliance, Introduction and Progress Report."** (Driskill Ballroom, Mezzanine Level)

11:00AM–12:30PM   *Session 16:* PANEL **"Listening to Users: How User Communities Can Inform Design."** (Citadel I and II, Mezzanine Level)

12:30PM   *Adjourn*

POST-CONFERENCE: WEDNESDAY, APRIL 12, 2006

12:45PM–1:45PM   *METS Community Meeting—open to all* (Driskill Ballroom, Mezzanine Level)

1:00PM–5:00PM   *Developers' Forum—open to all* (Chisholm Trail Room, Lobby Level)

2:00PM–5:30PM   *METS Editorial Board Meeting—for participants only* (Driskill Ballroom, Mezzanine Level)

POST-CONFERENCE: THURSDAY, APRIL 13, 2006

8:30AM–1:00PM   ***METS Editorial Board Meeting—for participants only*** (Austin Room, Mezzanine Level)

FULL PROGRAM WITH ABSTRACTS

PRECONFERENCE: MONDAY, APRIL 10, 2006

8:30ᴀᴍ–11:30ᴀᴍ   ***DLF Aquifer Metadata Working Group Meeting****—for project participants only* (Governor's Boardroom, Mezzanine Level)

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DAY ONE: WEDNESDAY, APRIL 10, 2006

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12:30ᴘᴍ–12:45ᴘᴍ   ***Opening Remarks*** (Driskill Ballroom, Mezzanine Level)

David Seaman, Digital Library Federation

1:00ᴘᴍ–2:30ᴘᴍ   ***Session 1:*** PANEL **"Developers' Forum Panel: Global Identifier Resolution."** (Driskill Ballroom Mezzanine Level)

- Tim DiLauro, Moderator, Johns Hopkins University
- John Kunze, California Digital Library
- Eva Müller, Uppsala Universitet [Sweden];
- Herbert Van de Sompel, Los Alamos National Laboratory Research Library

Digital object access via stable identifiers is an important problem for all digital libraries. The automatic mapping of identifiers to information objects, known as "resolution", is complicated by the diversity of available identifier schemes, resolution technologies, and expected uses.

A long-standing challenge for digital libraries is how to make resolution more stable and deterministic for the information objects they steward. Unable to control other providers' services, we struggle to make ongoing choices among providers, their objects and identifiers—the "Their Stuff" problem. Conversely, we also struggle to set up our own services so as to provide the best resolution experience to our users—the "Our Stuff" problem.

For example, in the "Their Stuff" category, a large amount of metadata (and more and more often, actual content) is being aggregated and indexed based on both proprietary and open harvesting protocols such as OAI-PMH. Because of the potential to harvest non-URL-based identifiers (e.g., URN:NBN, Handle) and the absence of a standard mechanism that can resolve all (or even most) of them, it is generally necessary to find a URL equivalent for each digital object in the harvested metadata. This makes it difficult to do things such as resolving to one of a number of copies, depending on which is available at a given time.

Two possible approaches to solving this and similar problems would be to generalize and/or centralize resolution. Creating a more generalized mechanism would make it easier to develop common practice—and common code—across many content stores with many identifier types. Developing a more centralized solution would obviate the need for every system that operates on identifiers to implement its own complete set of resolution services. These approaches might even encourage new service models.

The speakers on this panel will discuss some new approaches to global identifier resolution. They will address such issues as generalized, scheme-agnostic mechanisms, resolving to different copies of an object, and persistence.

1:00PM–2:30PM   *Session 2:* PANEL **"Implementing the PREMIS Data Dictionary."** (Citadel I and II, Mezzanine Level)

- Priscilla Caplan, Florida Center for Library Automation
- Nancy Hoebelheinrich, Stanford
- Marcus Enders, Niedersächsische Staats- und Universitätsbibliothek Göttingen
- Rebecca Guenther, Library of Congress

In May 2005, the PREMIS Working Group (Preservation Metadata: Implementation Strategies) released its Data Dictionary for Preservation Metadata, which defines and describes an implementable set of core preservation metadata with broad applicability to digital preservation repositories. In Nov. 2005, this international working group, comprised of 30 members from five countries, won the prestigious Digital Preservation Award, sponsored by the Digital Preservation Coalition and part of the UK Conservation Awards. This presentation/panel will discuss progress and problems in implementing the PREMIS data dictionary and some of the implementation choices to be made, with a particular focus on its use in METS. It will consist of a brief high level introduction to PREMIS and a panel discussion of two implementations and their similarities and differences.

1. Introduction to PREMIS: Priscilla Caplan (Florida Center for Library Automation) Overview of PREMIS, its assumptions and its neutrality in terms of any particular implementation. Choices for implementation will be reviewed (i.e. using the PREMIS schema published on the MA site; incorporating pieces of the schema into METS; or, incorporating into another framework such as DIDL).

2. Use of PREMIS with METS: A panel of three will discuss how the PREMIS data elements might be incorporated into METS. Marcus Enders (Niedersächsische Staats- und Universitätsbibliothek Göttingen) will discuss the MathARC implementation. Nancy Hoebelheinrich (Stanford University) will present Stanford's implementation of PREMIS in METS. Rebecca Guenther (Library of Congress) will outline the general issues to be considered in implementing PREMIS in a METS context and review how the two applications have approached it similarly and differently. The panel will then discuss the various approaches and take questions.

2:30PM–3:00PM   *Break* (Mezzanine Level)

3:00PM–4:30PM   *Session 3:* PANEL **"Libraries and Publishing—Reports from the Field."** (Driskill Ballroom, Mezzanine Level)

- Maria Bonn, University of Michigan
- David Millman, Columbia University
- Catherine Mitchell, California Digital Library
- David Ruddy, Cornell University

For several years, a number of DLF member libraries have been exploring active roles in the scholarly publishing domain. These efforts were sparked by shared concerns: increasing costs, diminishing access, loss of control of scholarly content, greater consolidation of commercial publishing—in general, an environment that appeared increasingly restrictive, expensive, and unsustainable.

As a challenge to prevailing publishing models, these libraries have been building tools and providing services in support of scholarly publishing, experimenting with alternative business models, modes of production, and technologies, in an effort to identify successful and sustainable scholarly publishing solutions. This session includes updates on these efforts and reports on recent projects.

Maria Bonn will reflect on the growing pains and growing gains— looking at the strategies Michigan has taken to scale up, their costs and benefits, and also considering the extent to which they can and should develop support for some of the traditional publisher functions that are outside current library realms of expertise.
David Millman will present on issues of interoperability at Columbia and the re-use of library materials in publications, for instruction, and for research.

Catherine Mitchell will present on the collaboration forged among the California Digital Library, University of California Press and Mark Twain Papers in exploiting the CDL's existing XTF infrastructure to create digital critical editions of all of Mark Twain's works. She will discuss specifically the kinds of editorial and infrastructure issues born of this collaboration and the project's promise of both delivering and informing scholarly work.

David Ruddy will report progress on a collaborative effort by Cornell University Library and the Penn State Libraries and Press to develop and distribute open source publishing software. DPubS, developed to support Project Euclid, Cornell's publishing initiative in mathematics, is a flexible and extensible publishing platform that will allow libraries to create alternative and affordable publishing opportunities for their communities and beyond.

3:00PM–4:30PM   *Session 4:* PANEL **"The LC/NSF Digital Archiving and Long-term Preservation Research Program (Digarch): Results and Prospects."** (Citadel I and II, Mezzanine Level)

- William LeFurgy, Library of Congress
- Ardys Kozbial, University of California, San Diego
- Margaret Hedstrom, University of Michigan
- Michael Nelson, Old Dominion University

The panel will provide a brief background about the program and reports from three of the 10 projects funded from the first round. Project reports will highlight preliminary findings that may be of broad interest to the digital preservation community. There will be discussion about how the projects relate to other Library of Congress National Digital Information Infrastructure and Preservation Program (NDIIPP) initiatives. Plans will be outlined for a potential second round of Digarch projects, which again will be administered through the National Science Foundation.

William LeFurgy to discuss NDIIPP and Digarch overall; Ardys Kozbial to discuss the "Digital Preservation Lifecycle Management Building" Digarch project; Margaret Hedstrom to discuss "Incentives for Data Producers to Create 'Archive-Ready' Data Sets" Digarch project; and Michael Nelson to discuss "Shared Infrastructure Preservation Models" Digarch project.

4:30PM–5:00PM   *Break* (Mezzanine Level)

5:00PM–6:30PM   *Session 5:* Metadata Strategies (Driskill Ballroom, Mezzanine Level)

A. "Development and Testing of Schema for Expressing Copyright Status Information in Metadata: Recommendations of the Rights Management Framework Group, California Digital Library."

Karen Coyle, California Digital Library
Sharon Farb, University of California, Los Angeles

Current efforts to express intellectual property rights associated with digital materials have focused on access and usage permissions, but many important permissions are defined by an item's copyright status rather than by license or contract. These permissions are not included in existing rights expressions. Digital libraries hold and provide access to many items for which copyright status is the sole governor of use, and even for licensed materials copyright status is often an essential element for those wishing to make further use of a work.

The California Digital Library (CDL) is working on a rights framework that will include recommendations for metadata to express the copyright status of digital resources. This metadata should accompany digital materials and be offered to users to inform them of the copyright status and potential uses of the item. It also allows the depositor to clearly state what data about the copyright status is not known by the holding library or archive, and what data may be known but has not been provided. Because this copyright information is often unknown or scant, the metadata includes fields for contact information for the office or individual who can best advise on use and permissions for the object in question.

Early versions of this work have been presented at the NISO Workshop on Rights Expression and the Society of American Archivists meeting, both in 2005. CDL has now developed a first schema language for this metadata and is seeking partners to test the metadata in actual digital library settings.

B. "Truth and Consequences, Texas: The University of Texas Libraries' Metadata Registry Project."

Alisha Little and Erik Grostic, University of Texas at Austin

The University of Texas at Austin's Metadata Registry began as a research project in 2001, and morphed into a fast track development project in 2003. This presentation will take people through the entire development and implementation process for the University of Texas Libraries' Metadata Registry. It will include: the rationale behind developing in house from scratch, rather than utilizing or modifying an existing product; the decisions we made regarding the data model and the use of FRBR and Dublin Core; what we wanted the system to do vs. what it does do; the perils of developing a pilot using a pilot (java struts); how we use it and how it works for us; and future development goals and questions.

C. "Sharing Resources by Collection: OAI Sets and Set Descriptions."

Muriel Foulonneau, University of Illinois at Urbana-Champaign
Sarah L. Shreeves, University of Illinois at Urbana-Champaign
Caroline Arms, Library of Congress

Many institutions are sharing their digital resources using metadata-sharing frameworks such as OAI-PMH. They sometimes organize their resources into subsets, such as OAI sets, which may or may not correspond to a defined collection. As the DLF/NSDL Best Practices for OAI Data Provider Implementations and Shareable Metadata <http://oai-best.comm.nsdl.org/cgi-bin/wiki.pl?TableOfContents> and other research notes, clustering resources by collections contributes to improving metadata shareability because the collection can provide context to individual items aggregated. The OAI protocol allows the definition of metadata sets and set descriptions which can be used to convey collection level descriptions. Usage of OAI sets and set descriptions varies considerably among data providers. Service providers are using collections defined by content providers in a multiplicity of ways: to build registries; for filtering results; and for ranking of item level search results.

However, harvesters find useful not only information about the collection of resources which is represented by the metadata in the OAI set, but also information about the collection of metadata records. The distinction between these two is oftentimes fuzzy. This presentation will present an analysis of current practice in the OAI domain of set and set description usage and will include the experiences of both a data provider (Library of Congress) and a service provider (UIUC) on the challenges of defining and describing sets (collections) of items in a metadata sharing framework.

5:00PM–6:30PM *Session 6:* Dynamic Digital Environments
(Citadel I and II, Mezzanine Level)

A. "The Evolution of a Digitization Program from Project Based to Large Scale at the University of Texas at Austin Libraries."

Aaron Choate, University of Texas at Austin

As The University of Texas Libraries continues to build and collaborate on large projects such as UTOPIA, the Texas Heritage Digitization Initiative, and the Texas Digital Library, it remains a challenge to also manage ongoing internal digital projects workflows. Aaron Choate and Uri Kolodney (Digital Library Production Services, UT Libraries) will discuss the challenges their unit faces in managing parallel project-based and production workflows as well as how such projects touch on the management of resources throughout the library.

B. "DAR: A Digital Assets Repository for Library Collections."

Mohamed Yakout and Magdy Nagi, Bibliotheca Alexandrina

The Digital Assets Repository (DAR) is a system developed at the Bibliotheca Alexandrina, the Library of Alexandria, to create and maintain the digital library collections. DAR acts as a repository for all types of digital material and provides public access to the digitized collections through Web-based search and browsing facilities. DAR is also concerned with the digitization of material already available in the library or acquired from other research-related institutions. A digitization laboratory was built for this purpose at the Bibliotheca Alexandrina.

The system introduces a data model capable of associating the metadata of different types of resources with the content such that searching and retrieval can be done efficiently. The data model is able to describe objects in either MARC 21 standard, which is designed for textual material or VRA core, which is widely used format for describing images and multimedia. DAR integrates the digitization and OCR process with the digital repository and introduces as much automation as possible to minimize the human intervention in the process. As far as we know, this is an exclusive feature of DAR. The system is also concerned with the preservation and archiving of the digitized output and provides access to the collection through browsing and searching capabilities.

The goal of this project is building a digital resource repository by supporting the creation, use, and preservation of varieties of digital resources as well as the development of management tools. These tools help the library to preserve, manage and share digital assets. The system is based on evolving standards for easy integration with Web-based interoperable digital libraries

C. "Contextualizing the Institutional Repository within Faculty Research."

Deborah Holmes-Wong, Janis Brown, and Sara Tompson, University of Southern California

It's very expensive to build an institutional repository that very few faculty members will use willingly and potentially damaging to the relationship that libraries have with their users to rely solely on mandates from upper administration for faculty compliance with depository requirements. Faced with this dilemma, librarians at the University of Southern California conducted a needs assessment prior to implementing any institutional repository software. We had a short timeline for the assessment and no funding available. We began by conducting a literature review on faculty needs in relation to institutional repositories, and we followed that with faculty interviews and later focus groups. In the process, we were able to validate observations made by other researchers about faculty, and their reasons for not using institutional repositories and develop use cases and a requirements document that will guide our development. We found that while Open Access to preprints and post-prints is a laudable goal for an institutional repository, for most faculty members even those committed to the ideal of Open Access, it is extra work to publish to an institutional repository. We will discuss an easily reproducible methodology used to gather information from faculty members that can be used to construct use cases and requirements. We will also discuss the results and propose how we will reframe the institutional repository requirements to make the repository useful to more faculty members.

7:00PM–8:00PM *Posters* (Mezzanine Level)

1. "Digital Imaging at the University of Texas at Austin."

 Aaron Choate, University of Texas Austin

 The University of Texas Libraries has been working with Stokes Imaging to refine their digital camera system (the CaptureStation) and workflow management tool for use in a collections-focused digitization center. The goal has been to take a highly accurate digital camera system and build a flexible product that will allow for the hardware investment to be leveraged to capture rare books, bulk bound books, negatives and transparencies and large format materials. John Stokes (Stokes Imaging) and Aaron Choate (Digital Library Production Services, UT Libraries) will show the progress they have made and discuss plans they have for further modifications to the system.

2. "WolfPack: A Distributed File Conversion Framework."

 Christopher Kellen, Carnegie Mellon

 WolfPack is an open-source software framework used to automate the processing and OCRing of scanned images in parallel using a variety of off-the-shelf programs.

 WolfPack is a (soon-to-be) open-source software framework used to automate the processing and OCRing of scanned images in parallel using a variety of off-the-shelf programs.

 In creating a digital library, a variety of conversion programs need to operate on each scanned image, however these programs often take considerable time and often run on different software platforms. Manually running these conversion programs is time-consuming and error prone. In order to increase the throughput of our scanning center we sought to automate this process of deriving files from the original scanned image.

 WolfPack solves this problem by providing a framework which: analyzes the files one currently has, determines which derived files are missing, gives these required conversions to worker processes to work on, collects the derived files from those worker processes, and stores the completed work.

This distributed file conversion framework allows one to automate the various file conversions on different software platforms, perform the work in parallel, and perform the conversions around the clock, therefore increasing the overall throughput of the scanning center.

In the past year, WolfPack has been used to process over a half million pages. The WolfPack source code is being released under an open source license.

3. "Navigating a Sea of Texts: Topic Maps and the Poetry of Algeron."

John Walsh and Michelle Dalmau, Indiana University

Topic Maps, including their XML representation, XML Topic Maps (XTM), are powerful and flexible metadata formats that have the potential to transform digital resource interfaces and support new discovery mechanisms for humanities data sources, such as large collections of TEI-encoded literary texts. Proponents of topic maps assert that topic map structures significantly improve information retrieval, but few user-based investigations have been conducted to uncover how humanities researchers and students truly benefit from the rich and flexible conceptual relationships that comprise topic maps.

The proposed poster will provide an introduction to Topic Maps and how a collection of TEI-encoded literary texts, specifically, the Swinburne Project <http://swinburnearchive.indiana.edu>, benefit from the use of topic maps. The poster will also provide an overview of the methodology used for the comparative usability study that was designed to assess the strengths and weaknesses of a topic map-driven interface versus a standard search interface. The interfaces that were presented to users will be demonstrated along with key findings from the usability study. Lastly, design alternatives based on the usability findings will also be presented.

The results of this study are intended to move the discussion of topic maps in the digital humanities beyond demonstrating the novel to providing evidence of the impact of Topic Maps and their extension of existing classificatory structures on the humanities researcher's discovery experience. We hope to provide those who are implementing topic maps or similar metadata structures in digital humanities resources with design recommendations that will ensure successful user interaction.

4. "Implications of the Copyright Office's Recommended Legislation for Orphan Works."

This poster session will provide an opportunity to explore how the proposed legislation might impact the creation of digital libraries. Based on an analysis of the comments submitted in response to the Federal Register Notice of Inquiry, the transcripts from the public hearings, and the final report and recommendations prepared by the Copyright Office, the poster will highlight the issues and compromises relevant to libraries and archives, termed "large-scale access uses" in the final report, and invite discussion and strategic thinking about how digital libraries might leverage the suggested revision to Section 514, Limitations on Remedies, should it be enacted into law.

7:00PM–9:30PM   *Reception* (Mezzanine Level)

DAY TWO: TUESDAY, APRIL 11, 2006

8:00AM–9:00AM   *Breakfast* (Mezzanine Level)

9:00AM–10:30AM   *Session 7:* Managing Digital Library Content (Driskill Ballroom, Mezzanine Level)

A. "Everything Old Is New Again: Repurposing Collections at the University of Michigan through Print on Demand."

Terri Geitgey and Shana Kimball, University of Michigan

Three years ago, the Scholarly Publishing Office of the University of Michigan University Library undertook development and stewardship of a print-on-demand program, which offers low-cost, high quality reprints of volumes from the university library's digital library collections, namely Making of America, Historical Math, and Michigan Technical Reports, as well as from the American Council of Learned Societies History E-Book collection. The program began very modestly, as a little cost-recovery service operating "on the side" and growth has been relatively gradual and scalable. However, recent developments, such as an arrangement with BookSurge to make our titles available through Amazon, and the recent addition of our metadata to Bowker's Books in Print, are forcing us to re-examine our current methods. Many challenges present themselves as we consider transitioning to a more formal, scalable, full-time service.

This paper explores why the University of Michigan University Library chose to develop this program, how the Scholarly Publishing Office built the print-on-demand program, and some of the challenges and rewards of the project. We'll cover the advantages and disadvantages of our methods, and chart new areas of growth and development for the program. We'll also touch on how this type of activity relates to the notion of "library as publisher" and the idea of selling information. Our goal is to encourage and enable other libraries to explore print-on-demand as a way to repurpose digital text collections.

B.   "The Next Mother Lode for Large-scale Digitization?

John Mark Ockerbloom, University of Pennsylvania

Much of the publicity around recent mass-digitization projects focuses on the millions of books they promise to make freely readable online. Because of copyright, though, most of the books provided in full will be of mainly historical interest. But much of the richest historical text content is not in books at all, but in the newspapers, magazines, newsletters, and scholarly journals where events are reported firsthand, stories and essays make their debut, research findings are announced and critiqued, and issues of the day debated. Back runs of many of these serials are available in major research institutions but often in few other places. But they have the potential for much more intensive use, by a much wider community, if they are digitized and made generally accessible.

In this talk, we will discuss an inventory we have conducted at Penn of periodicals copyright renewals. We found that copyrights of the vast majority of mid-20th-century American serials of historical interest were not renewed to their fullest possible extent. The inventory reveals a rich trove of copyright-free digitizable serial content from major periodicals as late as the 1960s. Drawing on our experience with this inventory's production and previous registry development, we will also show how low-cost, scalable knowledge bases could be built from this inventory to help libraries more easily identify freely digitizable serial content, and collaborate in making it digitally available to the world. Our initial raw inventory can be found at
<http://onlinebooks.library.upenn.edu/cce/firstperiod.html>.

9:00AM–10:30AM   *Session 8:* Remodeling Digital Library Systems
                       (Citadel I and II, Mezzanine Level)

A. "SRU: Version 1.2 and Beyond."

   Robert Sanderson, University of Liverpool

   The SRU Implementors Group and Editorial Board met at the
beginning of March in the Hague to formalise the changes needed for SRU
and CQL 1.2. This presentation will report on those decisions to the wider
digital library community, including the technical changes to the protocol
and query language, but also a discussion of how these changes affect
current implementations and people wishing to implement something but
not sure why, where or how to start.

   In particular, changes are expected to CQL to allow a sort
specification to be carried along with the query and the last non-profilable
feature (proximity) will be changed to allow community specified values.

   The SRU request and response formats will be tidied up with some
of the rough edges filed down. This will be the first real test of the
versioning system designed between version 1.0 and 1.1.

   The presentation will also report on the progression towards full
standardisation of SRU (now a NISO registered standard) and some
thoughts about what the future might bring for digital library
interoperability with SRU compliant applications developed outside of our
community.

B. "Disambiguating Multiple Paths to Content Using RDF Triples.

   Barbara Taranto, New York Public Library

   Traditional hierarchical data trees are ideal for the development
and deployment of user driven navigational strategies since there is a
direct and unambiguous path through the generations. However, when the
underlying object model employs RDF triples any given object can have
multiple family trees, which may include, or rather does not preclude,
stepfathers, half-sisters etc. This paper will discuss the challenges of
building richer navigational tools to enhance access to multiple lineages,
and the possibilities it presents for the proliferation of smarter human and
machine services.

10:30ᴀᴍ–11:00ᴀᴍ   ***Break*** (Mezzanine Level)

11:00ᴀᴍ–12:30ᴘᴍ   *Session 9:* PANEL **"Surfacing Consistent Topics Across Aggregated Resource Collections**
(Driskill Ballroom, Mezzanine Level)

- David Newman, University of California, Irvine
- Martin Halbert, Emory University
- Kat Hagedorn, University of Michigan
- Bill Landis, California Digital Library

Surfacing consistent topics across a heterogeneous collection of information resources is a challenge faced by many digital libraries. This is true both for large-scale aggregation services, and for those seeking to federate a more focused set of resources for a specific audience. This session provides an overview of clustering and classification strategies and research, and considers two specific implementations as a means of engaging the audience in a discussion of possibilities for automated or semi-automated topical remediation and enhancement in digital library work.

Note: Four 15-minute presentations, followed by discussion with the audience.

"Automated Subject Indexing of Document Collections."

David Newman, UC, Irvine

Clustering and classification techniques—that are well known in computer science—have potentially valuable applications for digital libraries. This presentation will provide an overview of these techniques, and discuss the strengths and weaknesses of several methods to topically organize and categorize a collection of text documents. We will review several case studies including an OAI-harvested collection where individual documents vary widely in their length and content.

"Tools and Findings of the Emory Meta-Combine Project."

Martin Halbert, Emory University

The MetaCombine Project, <http://www.metacombine.org>, has developed: 1) search techniques for combinations of OAI-PMH and Web resources, 2) semantic clustering and taxonomy assignment for metadata and content, and 3) frameworks for combining digital library components acting as a whole (hence the project name: MetaCombine). The project (funded by The Andrew W. Mellon Foundation) has developed twenty separate software modules as enhancements to the Heretrix Web crawler and other DL tools, and has evaluated these tools with cooperation from the Universities of Illinois and Michigan. This presentation will focus on the MetaCombine project's assesment of the effectiveness of several specific semantic clustering techniques for improving organization and access to bodies of metadata exposed via the OAI-PMH as well as Web resources. The project's researchers not only evaluated existing techniques, but also developed a new mathematical algorithm (and associated software) for clustering termed non-negative matrix factorization, which is more efficient than other techniques for clustering metadata records.

"How (Not) to Use a Semi-automated Classification Tool."

Kat Hagedorn, University of Michigan

Clustering services hold much promise for providing end users with a more targeted way of navigating large aggregator sites like OAIster, as well as more focused federations of scholarly resources such as those envisioned for the collections created in the context of the DLF/Aquifer initiative. This presentation discusses successes and challenges in prototype use of Emory University's MetaCombine NMF Document Clustering System Web Service at the University of Michigan.

"Go Fish!: Experiments with Topical Metadata Enhancement in the American West Project."

Bill Landis, California Digital Library

The CDL experimented with topical clustering in support of creating consistent metadata to drive a hierarchical faceted browse interface for the harvested metadata collection assembled for the American West Project. This presentation reviews issues arising from the topical enhancement work done for this project, speculates on a sustainable process design for longer term use of this approach, and considers some scenarios for topic enhancement work in academic digital libraries.

11:00AM–12:30PM *Session 10:* Digital Archiving (Citadel I and II, Mezzanine Level)

A. "Archiving Courseware Websites to DSpace, Using Content Packaging Profiles and Web Services."

William Reilly and Robert Wolfe,
Massachusetts Institute of Technology

Standards-based development of new functionality for the DSpace platform to expose Web Services that import and export "courseware" Web sites is the study of an MIT iCampus project, CWSpace. This presentation reviews these DSpace capabilities (nearing completion) of: 1) the "Lightweight Network Interface" (LNI), aWebDAV-based implementation of basic archive services (a SOAP interface is also provided); 2) a plug-in architecture which permits the use of content packager plug-ins (e.g. IMS-CP; METS) for both submission (SIP) and dissemination (DIP); 3) crosswalk plug-ins to accept descriptive metadata other than Dublin Core (e.g. MODS; LOM), to be rendered to DSpace's native Qualified Dublin Core.

Key to much of this software development has been the creation of an application profile for the IMS Content Package, serving as a specification to both the DSpace platform as content consumer, and to the initial target content provider, MIT's OpenCourseWare (OCW). The resulting courseware packages—based on a standard, shaped by this profile—are designed to be interoperable with other collaborative learning environments and tools (e.g. RELOAD; dotLRN LORS; other).

Topics addressed in the presentation include issues faced in working with these content packaging standards for archiving complex digital objects (Web sites); issues in rendering Web sites from within a repository; issues in (future) development to ingest the newer "logical" content packages (URLs rather than only local files); issues concerning intellectual property and student privacy when working with educational materials.

B. "Video Preservation: The Truth Is Out There."

Rick Ochoa and Melitte Buchman, New York University

The Hemispheric Institute Digital Video Library is currently a two year collaboration between NYU's Digital Library Team and the Hemispheric Institute of Performance and Politics (HI), supported by a grant from the Mellon Foundation. The HI mission is to provide an open resource for those scholars, artists and activists working on the relation between politics and performance in the Americas. To that end the Digital Library is digitizing and preserving 250 hours of video per year of original performances, lectures, and symposia.

In shaping a video preservation strategy, we have encountered many technical challenges. As curious as it may seem, however, our greatest difficulty in digitizing video is the semantics of what is meant when video and preservation are used together. As a model for video preservation we've looked closely at our digital imaging initiative and the attempt to ground the digital image surrogates in authenticity. Ideally, the only perceptible change is in the container format. We have adopted similar approachs in grounding video materials, and have met with limited success due to issues of cost and pragmatism.

Whereas video commercial restoration implements procedures to produce masters that are often heavily reworked surrogates; i.e preservation versus restoration, at NYU we have developed specific practices to uphold the spirit of grounding video assets, and have chosen to eschew restoration in favor of preservation.

In this presentation we will talk about specific benchmarks that we've developed, areas we've been able to automate, ways that we've differentiated acceptable intervention in the master and in the derivative.

C. "Automated Risk Assessment for File Formats."

   Hannah Frost and Nancy Hoebelheinrich, Stanford University

   Stanford's participation in the National Digital Information Infrastructure and Preservation's (NDIIPP) Archive Ingest and Handling Test (AIHT) provided the opportunity to automate a mechanism to query a digital object for assessment of the preservability of its object class by scoring reported technical characteristics against Stanford Digital Repository (SDR) preservation policy. The SDR Team developed a process, integrated into repository ingestion workflow, which incorporates JHOVE and applies PREMIS. This presentation will discuss the conceptual underpinnings, operational experiences, and the potential seen for the file format preservation matrices used to support SDR policy and services.

12:30PM–2:30PM   *Break for Lunch* [Individual Choice]

1:30PM–2:30PM   *Posters* (Mezzanine Level)

1. "Digital Imaging at the University of Texas at Austin."

   Aaron Choate, University of Texas at Austin

   The University of Texas Libraries has been working with Stokes Imaging to refine their digital camera system (the CaptureStation) and workflow management tool for use in a collections-focused digitization center. The goal has been to take a highly accurate digital camera system and build a flexible product that will allow for the hardware investment to be leveraged to capture rare books, bulk bound books, negatives and transparencies and large format materials. John Stokes (Stokes Imaging) and Aaron Choate (Digital Library Production Services, UT Libraries) will show the progress they have made and discuss plans they have for further modifications to the system.

2.   "WolfPack: A Distributed File Conversion Framework."

Christopher Kellen, Carnegie Mellon University

WolfPack is a (soon-to-be) open-source software framework used to automate the processing and OCRing of scanned images in parallel using a variety of off-the-shelf programs.

In creating a digital library, a variety of conversion programs need to operate on each scanned image, however these programs often take considerable time and often run on different software platforms. Manually running these conversion programs is time-consuming and error prone. In order to increase the throughput of our scanning center we sought to automate this process of deriving files from the original scanned image.

WolfPack solves this problem by providing a framework which: analyzes the files one currently has, determines which derived files are missing, gives these required conversions to worker processes to work on, collects the derived files from those worker processes, and stores the completed work.

This distributed file conversion framework allows one to automate the various file conversions on different software platforms, perform the work in parallel, and perform the conversions around the clock, therefore increasing the overall throughput of the scanning center.

In the past year, WolfPack has been used to process over a half million pages. The WolfPack source code is being released under an open source license.

3.   "Navigating a Sea of Texts: Topic Maps and the Poetry of Algeron."

John Walsh and Michelle Dalmau, Indiana University

Topic Maps, including their XML representation, XML Topic Maps (XTM), are powerful and flexible metadata formats that have the potential to transform digital resource interfaces and support new discovery mechanisms for humanities data sources, such as large collections of TEI-encoded literary texts. Proponents of topic maps assert that topic map structures significantly improve information retrieval, but few user-based investigations have been conducted to uncover how humanities researchers and students truly benefit from the rich and flexible conceptual relationships that comprise topic maps.

The proposed poster will provide an introduction to Topic Maps and how a collection of TEI-encoded literary texts, specifically, the Swinburne Project <http://swinburnearchive.indiana.edu>, benefit from the use of topic maps. The poster will also provide an overview of the methodology used for the comparative usability study that was designed to assess the strengths and weaknesses of a topic map-driven interface versus a standard search interface. The interfaces that were presented to users will be demonstrated along with key findings from the usability study. Lastly, design alternatives based on the usability findings will also be presented.

The results of this study are intended to move the discussion of topic maps in the digital humanities beyond demonstrating the novel to providing evidence of the impact of Topic Maps and their extension of existing classificatory structures on the humanities researcher's discovery experience. We hope to provide those who are implementing topic maps or similar metadata structures in digital humanities resources with design recommendations that will ensure successful user interaction.

4. "Implications of the Copyright Office's Recommended Legislation for Orphan Works."

Denise Troll Covey, Carnegie Mellon University

This poster session will provide an opportunity to explore how the proposed legislation might impact the creation of digital libraries. Based on an analysis of the comments submitted in response to the Federal Register Notice of Inquiry, the transcripts from the public hearings, and the final report and recommendations prepared by the Copyright Office, the poster will highlight the issues and compromises relevant to libraries and archives, termed "large-scale access uses" in the final report, and invite discussion and strategic thinking about how digital libraries might leverage the suggested revision to Section 514, Limitations on Remedies, should it be enacted into law.

2:30PM–4:00PM   *Session 11:* PANEL **"DLF Aquifer: Bringing Collections to Light."** (Driskill Ballroom, Mezzanine Level)

- Katherine Kott, DLF Aquifer Director
- Perry Willett and Kat Hagedorn, University of Michigan
- Jon Dunn, Indiana University
- Thornton Staples, University of Virginia
- Thomas Habing, University of Illinois at Urbana-Champaign

This panel will highlight DLF Aquifer phase 1 accomplishments. Following a brief project status report, the program will focus on two project deliverables:

1. A DLF Aquifer portal of MODS OAI harvested records. The University of Michigan is hosting metadata harvesting for DLF Aquifer and will demonstrate the DLF Aquifer portal, which experiments with the DLF MODS Implementation Guidelines for Cultural Heritage Materials.

2. "Asset action packages" to support a consistent user experience and deeper level of interoperability across collections and repositories. An asset action package is an XML-defined set of actionable URIs for a digital resource that delivers named, typed actions for that resource. Members of the DLF Aquifer Technology/Architecture Working Group will demonstrate the application of asset action packages to aggregated image collections in an OAI service provider.

3. A third outcome of the past year's work, the DLF MODS Implementation Guidelines for Cultural Heritage Materials is proposed as an interactive BOF session.

2:30PM–4:00PM   *Session 12:* Tools (Citadel I and II, Mezzanine Level)

A. "The XML Submission Tool: A System for Managing Text Collections at Indiana University

Dazhi Jiao, Tamara Lopez, and Jenn Riley, Indiana University

XML-based schemes like EAD and the TEI are attractive to organizations because they normalize the key concepts in a domain using a structured syntax. Both standards are document-centric, designed to be created and read by humans, and characterized by a mixture of highly structured elements with unstructured content.

Because the XML standard also mandates machine-readability, a perceived benefit of using XML markup languages is system interoperability. However, unlike data-centric XML used for transaction processing, languages like the TEI and EAD are developed in an iterative editorial process that involves analysis of source text and encoding. The illusory nature of interoperability in such an environment is clear: two valid instance documents can employ the markup language and adhere to content standards in vastly different ways. The flexibility and complexity inherent in using mixed-content markup languages thus demands that digital libraries proactively manage the document creation process. This is necessary to ensure that encoding and content guidelines are followed while meeting the descriptive needs of source texts and the data model requirements of delivery and access systems. The XML Submission Tool manages the production and workflow of collections described using XML markup languages. Implemented using open-source Java software and XML technologies, it allows document creators to submit documents to collection specific rule-based content review, to review descriptive metadata, and to preview HTML delivery. In addition, the submission tool serves as an editorial repository that can be integrated with production systems and digital repositories.

B. "The Archivists' Toolkit: Streamlining Production and Standardizing Archival Information."

Bradley Westbrook, University of California, San Diego
Lee Mandell, Archivists' Toolkit
Jason Varghese, New York University

The Archivists' Toolkit is a multi-institution, multi-year project initially funded by the Digital Library Federation and subsequently by The Andrew W. Mellon Foundation. This project update will occur several weeks before the beta version of the AT application is scheduled to be released for testing to the project partner repositories. The project update will consist of an account of how the application specification has been modified as a result of public comment last fall, and it will describe the testing process planned for the application. A considerable portion of the presentation will be devoted to demonstrating a prototype of the application and several of its salient features such as ingest of legacy data, recording of archival resource information, and production of EAD encoded finding aids, METS encoded digital objects, and administrative reports. Substantial time will be allocated to questions from attendees.

4:00PM–4:15PM *Break* (Mezzanine Level)

4:15PM–5:15PM *Birds of a Feather (BOF) Session 1:*

1. "DLF Aquifer MODS Implementation Guidelines: Overview/ Discussion of Comments and Changes." (Driskill Ballroom, Mezzanine Level)

- Sarah L. Shreeves, University of Illinois at Urbana-Champaign
- Laura Akerman, Emory University
- John Chapman, University of Minnesota
- Melanie Feltner-Reichert, University of Tennessee
- Bill Landis, California Digital Library
- David Reynolds, The Johns Hopkins University
- Jenn Riley, Indiana University
- Liz Milewicz, Emory University
- Gary Shawver, New York University

This BOF will span both BOF slots (4:15-5:15 and 5:25-6:25); attendees should feel free to drop in at anytime. Although there may be some overlap between the two sessions, the first BOF will focus on an overview of the comments received and a discussion of the changes made to the guidelines. The second session will largely be devoted to an open discussion of the best approach to a central question raised by the guidelines and comments received: how and where to describe the original analog object and its digital surrogate.

The Metadata Working Group of the DLF Aquifer Initiative has developed a set of implementation guidelines for the Metadata Object Description Schema (MODS). The guidelines were developed to encourage creation of rich, shareable metadata that is coherent and consistent, and, thus, useful to aggregators and end users. The draft guidelines were widely distributed for community input in December 2005; the comment process ended in early February. Since then the Metadata Working Group has been reviewing comments and making changes to the Guidelines. Members of the Working Group will present an overview of the comments received and the proposed changes to the guidelines, soliciting additional feedback from members of the DLF community.

2.   "Global Identifier Resolution: Developers' Forum."
      (Maximilian Room, Mezzanine Level)

      Tim DiLauro, Organizer, The Johns Hopkins University
      John Kunze, Organizer, California Digital Library

      This BOF is for anyone interested in possible follow-on activities
and topics arising in the Developers' Forum panel from Session 1 on
Monday. It concerns the automatic mapping of identifiers to information
objects, known as resolution, which is complicated by the diversity of
available identifier schemes, resolution technologies, and expected uses.
Likely topics include exploring practical collaborations in generalized
and/or centralized resolution services.

      A long-standing challenge for digital libraries is how to make
resolution more stable and deterministic for the information objects they
steward. Unable to control other providers' services, we struggle to make
ongoing choices among providers, their objects and identifiers—the
"Their Stuff" problem. Conversely, we also struggle to set up our own
services so as to provide the best resolution experience to our users—the
"Our Stuff" problem.

      For example, in the "Their Stuff" category, a large amount of
metadata (and more and more often, actual content) is being aggregated
and indexed based on both proprietary and open harvesting protocols such
as OAI-PMH. Because of the potential to harvest non-URL-based
identifiers (e.g., URN:NBN, Handle) and the absence of a standard
mechanism that can resolve all (or even most) of them, it is generally
necessary to find a URL equivalent for each digital object in the harvested
metadata. This makes it difficult to do things such as resolving to one of a
number of copies, depending on which is available at a given time.

      Two possible approaches to solving this and similar problems
would be to generalize and/or centralize resolution. Creating a more
generalized mechanism would make it easier to develop common
practice—and common code—across many content stores with many
identifier types. Developing a more centralized solution would obviate the
need for every system that operates on identifiers to implement its own
complete set of resolution services. These approaches might even
encourage new service models.

3. "Electronic Records Archives: Systems and Metadata
    Architectures." (Austin Room, Mezzanine Level)

    Quyen Nguyen and Dyung Le,
    U.S. National Archives and Records Administration

    The Electronic Records Archives (ERA) system will be a future
archives system in the digital object world. It will authentically preserve
any type of electronic record, created by any entity in the Federal
Government, and it will provide this electronic information anytime and
anyplace to anyone with an interest and legal right to access it. Within
such system whose main goals are to preserve and provide access to
digital records over time, Metadata Management is a critical service.

    In this paper, we will present typical use case scenarios of ERA
that involve or require metadata management. These use cases will
encompass the creation, retrieval, update, and deletion of metadata of
digital records throughout the record life cycle. The ERA system has to
meet multiple challenges. On one hand, ERA has to deal with challenges
that are inherent to the digital object world; on the other hand, it has to
fulfill the requirements posed by the business practices of the archival
community in the context of NARA mission.

    We also study different database management models (relational,
object-relational, native XML) for the ERA metadata repositories. The
study will focus on how these technologies can satisfy the systems
engineering principles of ERA such as performance, scalability,
availability, backup, and recovery.

    Meeting the information retrieval needs of the diverse, and
potentially huge, ERA user community, given the resource limitations of
ERA is a serious challenge. We will discuss options being considered by
NARA to meet this challenge. ERA is intended to exist for an essentially
indefinite period of time, and its Service-Oriented Architecture provides
the flexibility to evolve over time as technology changes, including
changing out COTS products. There are no current or emerging standards
(other than for metadata) governing the Enterprise Search arena. Hence
there is a real danger of becoming locked into a particular Enterprise
Search vendor's proprietary approach. The paper will discuss the related
technical issues and possible mitigations.

    Finally, since ERA architecture is based on Web services
technologies, and it is meant to be used by NARA personnel, record
managers at federal agencies, as well as the general public, appropriate
security scheme based on user access roles has to be implemented in order
to protect the integrity of record metadata.

4. "Update of Activities of the DLF Services Framework Working Group." (Jim Hogg Parlor)

    Geneva Henry, Rice University

    The DLF Services Framework Working Group (SFWG) seeks to understand and model the research library in today's academic environment. Our mission is to develop a framework within which the services offered by libraries, both business logic and computer processes, can be understood in relation to other parts of the institutional and external information landscape. This framework will help research institutions plan wisely for providing the services needed to meet the current and emerging information needs of their constituents.

    This Birds of a Feather session will provide an overview of the group's current work and the issues that have been identified to date. Approaches for creating the framework will be discussed, along with the methodologies under consideration for capturing the business logic and software for successful development of the framework. The group's preliminary white paper and presentation presented to the DFL Steering Committee in May 2005, available at <http://www.diglib.org/architectures/serviceframe/>provide an overview of the motivation for this work. Participants are encouraged to provide feedback and ideas that will contribute to the group's activities.

    Creating a framework showing the abstraction of services that can be identified throughout digital libraries will allow a more holistic view of the information environment, facilitating better planning for incorporation of shared services, integration between, and interoperability among digital library systems and processes.

    The SFWG is actively identifying existing similar efforts, such as the JISC e-Framework Initiative, that are currently underway so as to benefit from their work, avoid duplication of efforts, and leverage collaborative findings. Existing standards, policies and protocols for identifying and describing business processes are being examined so that an appropriate model can be adopted that will allow the services framework that is developed to be commonly understood when examined by a diverse group of readers. The research institutions that are the primary target audience for this work will be included in the research being undertaken so that they will have an opportunity to provide input on the way information resources and services are provided at their institutions.

Since the goal is to provide a framework that can be implemented to ensure these needs are met, it is important that these organizations understand their current landscape and how the framework can assist in future planning. A full time researcher, the 2006 DLF Distinguished Fellow for the Services Framework Initiative, will lead the research, working with the established DLF Services Framework Working Group that was formed in 2004 and has been actively pursuing this work to date.

5:25PM–6:25PM   *Birds of a Feather (BOF) Session 2:*

1. "DLF Aquifer MODS Implementation Guidelines." [continued] (Driskill Ballroom, Mezzanine Level)

    - Sarah L. Shreeves, University of Illinois at Urbana-Champaign
    - Laura Akerman, Emory University
    - John Chapman, University of Minnesota
    - Melanie Feltner-Reichert, University of Tennessee
    - Bill Landis, California Digital Library
    - David Reynolds, The Johns Hopkins University
    - Jenn Riley, Indiana University
    - Liz Milewicz, Emory University
    - Gary Shawver, New York University

This BOF will span both BOF slots (4:15-5:15 and 5:25-6:25); attendees should feel free to drop in at anytime. Although there may be some overlap between the two sessions, the first BOF will focus on an overview of the comments received and a discussion of the changes made to the guidelines. The second session will largely be devoted to an open discussion of the best approach to a central question raised by the guidelines and comments received: how and where to describe the original analog object and its digital surrogate.

The Metadata Working Group of the DLF Aquifer Initiative has developed a set of implementation guidelines for the Metadata Object Description Schema (MODS). The guidelines were developed to encourage creation of rich, shareable metadata that is coherent and consistent, and, thus, useful to aggregators and end users. The draft guidelines were widely distributed for community input in December 2005; the comment process ended in early February. Since then the Metadata Working Group has been reviewing comments and making changes to the Guidelines. Members of the Working Group will present an overview of the comments received and the proposed changes to the guidelines, soliciting additional feedback from members of the DLF community.

2.   "Archivists' Toolkit." (Maximilian Room, Mezzanine Level)

Bradley Westbrook, University of California, San Diego

The Archivists' Toolkit is a multi-institution, multi-year project initially funded by the Digital Library Federation and subsequently by The Andrew W. Mellon Foundation. A brief project update and a demonstration of the Archivists' Toolkit will be presented as part of session 12 of the DLF Spring Forum. This BOF will serve as a followup to that presentation and will provide the opportunity for DLF attendees to ask additional questions about the Archivists' Toolkit application and to discuss in greater detail with project team members some of the application's design features and functional areas being considered as additions to the application in subsequent development phases.

3.   "DLF Inter-institutional Communication." (Austin Room, Mezzanine Level)

Michael Pelikan, Pennsylvania State University
David Seaman, Digital Library Federation

The Newsletter saw a big surge in submissions when we first breathed life back into it. People were pleased with the switch to xhtml, and seemed to understand that their submissions were feeding not only the Newsletter, but DLF registries.

Since then, especially in the past calendar year, the submission rate has fallen way off. I cannot browbeat submissions out of colleagues who are busy doing the very projects we'd all most like to hear about—indeed: when they're ready (or sooner!) we'll hear about them at the Forum! We'd like to query an interested group of attendees as to some of the following:

- What can DLF do to foster communication between its member institutions?
- If the Newsletter is useful, what can we do to ease or normalize its timely production?
- Along those lines, is it time for a few pilot experiments either with authenticated blogs, or a DLF-hosted wiki with authenticated editing access?
- Should we be pushing stuff out with RSS? If so, fine.
- Where will we get the content and who will feed it in?
- Shall we offer to edit or redact it?
- What, of any of this, will people use, buy in to, get enthusiastic about, and will also, at the same time, give DLF the data needed to keep its registries up to date?

4.   "Central Repository for a DL How-to." (Jim Hogg Parlor)

Jewel Ward, University of Southern California
Barrie Howard, Digital Library Federation

Currently, digital library (DL) how-to information is spread out in a variety of locations online or in printed textbooks, and is often out of date. We believe there is a need for a central repository that contains current information on "how to build a digital library." If one of the ideals of our profession is to provide access to information, the idealistic vision for this project would be "providing access to information about how to share information."

We would like to discuss approaches to this topic, especially regarding what colleagues think is needed, what kind of information and content the site should contain, who the intended audience would be, and how this site could be created and maintained. The trick, as some have pointed out, is to create a how-to that is not so detailed it becomes useless, nor so high level that it provides little practical guidance.

The initial vision is for a publicly available Web site that covers the end-to-end building of a predefined range of digital library services from a workflow perspective. The envisioned audiences are low-resource, first- through third-world institutions around the globe that need a reference or starting point when employees are faced with, "how and where do I begin?" Another thought is that it could be a best practices portal site, as well as one that could be translated into other languages. We believe that a DL how-to site with useful content would be a nice complement to current open-source digital library software.

DAY THREE: WEDNESDAY, APRIL 12, 2006

8:00AM–9:00AM   *Breakfast* (Mezzanine Level)

9:00AM–10:30AM   *Session 13:* Digital Library Services
                            (Driskill Ballroom, Mezzanine Level)

A. "Recommendations and Ranking: Experiments in Next Generation
    Library Catalogs."

    Brian Tingle, California Digital Library

    During the last decade, there have been fundamental changes in the
way that people find and use information on the Internet. Google,
Amazon, e-Bay and other successful commercial services have introduced
technical approaches such as relevance ranking, personalization,
recommending and faceted browsing that have fundamentally reshaped
user expectations. Currently, search results from library catalogs are not
presented in a transparent or usefully- ranked manner to the user, in stark
contrast to Internet search engines. Nor do library systems offer
recommending and personalization services that are very popular with
users in e- commerce settings. Recent Mellon Foundation-funded research
by the California Digital Library into how library catalogs can offer such
modern search features will be presented and discussed.

B. "Unbundling the ILS: Deploying an E-commerce Catalog Search
    Solution."

    Andrew Pace and Emily Lynema, North Carolina State University

    The explosive growth of the Internet and the accompanying
achievements in searching technology have highlighted the weaknesses of
traditional library catalogs in today's information environment. Search
engines and e-commerce tools that specialize in finding and presenting
useful search results have become popular alternatives for many patrons.
In response, NCSU Libraries has unbundled keyword searching of the
library catalog from the functionality provided by the back-office
integrated system. This presentation will provide an overview of the local
implementation process, including an environmental scan of the
marketplace and an introduction to the commercial software chosen. A
demonstration of the library's new catalog search will reveal advances in
natural language searching, relevance ranking, result-set exploration, and
response time, as well as new features like "true browsing" of the
collection by the Library of Congress Classification scheme. The
presenters will address the technical architecture and requirements for co-
existence with the legacy catalog, as well as future plans (including a
FRBR-like record display), usability testing, and assessment plans.

9:00AM–10:30AM   *Session 14:* Packaging and Performance
                                          (Citadel I and II, Mezzanine Level)

A. "The Music Encoding Initiative (MEI)."

    Perry Roland, University of Virginia

    The ability to more easily create richly and consistently encoded
musical sources would support the analysis and cross-comparison of
musical data by enabling activities such as building structured virtual
annotated compilations of various instantiations of a work, or contextual
searching and detailed data retrieval across indexed XML representations.
The Music Encoding Initiative (MEI) DTD is a developing standard for
such work.

    The purpose of MEI DTD is two fold: to provide a standardized,
universal XML encoding format for music content (and its accompanying
metadata) and to facilitate interchange of the encoded data. MEI is not
designed to be an input code per se, like the Plaine and Easie code;
however, it is intended to be human-readable and easily understood and
applied. MEI has a significant advantage over other proposed XML
standards that define an entirely new terminology because it uses familiar
names for elements and attributes. Using common music notation
terminology has the benefit of making MEI files more human-readable,
and makes clear the correspondence between MEI-encoded data and
music notation. The true potential of MEI is that a single file to encode
multiple variations of a musical work and generate multiple outputs.
Because of its emphasis on comprehensiveness, comprehensibility, and
software independence, MEI may also function as an archival data format.

    The presentation will describe the features of the MEI DTD and
the advantages of its use as an encoding standard. Methods for capturing
data in MEI will be discussed and a brief demonstration of displaying MEI
data will be given.

B. "METS Profile Development at the Library of Congress:
    An Update."

    Morgan Cundiff, Library of Congress

    The Library of Congress has continued to develop METS Profiles
    for specific types of digital objects. This presentation will feature
    recent development of profiles for audio or video Recorded Events,
    Photographs, Historical Newspapers, and Bibliographic Records.

Explanation and demonstration of these object types will be based on items in the online application "Library of Congress Presents: Music, Theater, and Dance". Specific topics included will be: 1) developing a consistent methodology for profile creation, 2) using METS and MODS together to represent object structure, 3) creating tools for validating METS documents (i.e. checking for compliance to a given profile) and 4) moving toward METS harvesting and interoperation. Discussion from the floor will be welcomed.

C. "Automated Generation of METS Records for Digital Objects."

Nate Trail, Library of Congress

This presentation will demonstrate a loose set of configurable tools to generate METS objects from files and metadata automatically. For Library of Congress Presents: Music, Theater and Dance, we ingest files of digitized content and merge them with metadata from various data sources to build our METS objects. The demonstration will show conversion of file system directory structure into XML documents, SRU searching for bibliographic data, JDBC searching for rights and other item specific data stored in common databases. The objects are then indexed and stored for future rendering according to the METS profile for that object.

We use open source applications and tools (especially Cocoon and XSL) to interact with various data components. For each type of digitized content, we may need to interact with different databases for metadata, or expect to see different file structures and file types, so the stylesheets and Cocoon pipelines are broken into small steps that can be easily re-used or modified. This enables us to more rapidly ingest collections of digitized content according to METS profiles we develop.

10:30AM–11:00AM   *Break* (Mezzanine Level)

11:00AM–12:30PM *Session 15:* PANEL **"The Open Content Alliance, Introduction and Progress Report."** (Driskill Ballroom, Mezzanine Level)

- Rick Prelinger, The Internet Archive
- Robin Chandler, California Digital Library
- Merrilee Proffitt, RLG

In October 2005, the Internet Archive announced a partnership of libraries and technology interests including the University of California, the University of Toronto, the European Archive, the National Archives (UK), O'Reilly Media, Inc., Adobe, and Hewlett Packard Labs. Shortly after, RLG, the Biodiversity Heritage Library, Emory University, Johns Hopkins University Libraries, Rice University, University of Texas, University of Virginia, and others joined the newly formed Open Content Alliance. This unique partnership of public and private seeks to digitize and make freely available published, out of copyright material ... to any party.

This panel will discuss the formation of the OCA, principals, working groups, and what the group intends to do in order to meet a goal of having a mass of material on line and ready for use by October 2006. The panel will allow for plenty of time for audience discussion and input.

11:00AM–12:30PM *Session 16:* PANEL **"Listening to Users: How User Communities Can Inform Design."** (Citadel I and II, Mezzanine Level)

Ellen Meltzer, Felicia Poe, and Tracy Seneca
California Digital Library

Outline of the panel:

1. Listening to users: Creating more useful digital library tools and services by understanding the needs of user communities.

2. The Calisphere Project: Supporting the use of university digital resources by multiple user communities.

3. The Web-at-Risk Project: Enabling curators to capture and manage collections of Web-published government and political information.

In order to create more useful digital library tools and services, we must first understand the needs of our user communities. In this panel discussion, we will describe what the California Digital Library has learned from carrying out an array of assessment activities with our current and potential users. Through the presentation of several projects in differing stages of development, we will share our growing insight into digital library user communities, including students, faculty, K-12 teachers, librarians, archivists and others. Panelists will explore the effective use of focus groups, interviews, surveys, and usability testing.

12:30PM   *Adjourn*

POST-CONFERENCE: WEDNESDAY, APRIL 12, 2006

12:45PM–1:45PM   *METS Community Meeting—open to all* (Driskill Ballroom, Mezzanine Level)

1:00PM–5:00PM   *Developers' Forum—open to all* (Chisholm Trail Room, Lobby Level)

2:00PM–5:30PM   *METS Editorial Board Meeting—for participants only* (Driskill Ballroom, Mezzanine Level)

POST-CONFERENCE: THURSDAY, APRIL 13, 2006

8:30AM–1:00PM   *METS Editorial Board Meeting—for participants only* (Austin Room, Mezzanine Level)

BIOGRAPHIES

A

Caroline Arms is in the Office of Strategic Initiatives of the Library of Congress. She is responsible for the OAI Data Provider service that make records for LC's digitized historical materials available for harvesting. She has played a technical role in other aspects of managing and providing access to digital content, including integrating twenty-seven collection from other institutions into American Memory and analysing digital formats for sustainability. She is also the program officer for two of the eight initial Digital Preservation Partnerships sponsored by the National Digital Information Infrastructure and Preservation Program (NDIIPP).

B

Maria Bonn has a 1990 Ph.D. in American Literature from SUNY Buffalo where her work was focused on twentieth century American literature. After several years teaching and writing as an itinerant academic, she acquired a Masters of Information Science from the University of Michigan School of Information. Since 1997, she has worked for the University of Michigan, first as an Interface Specialist for Digital Library Collections, then in Digital Library Program Development and, most intensively as the head of the Library's scholarly publishing effort. In this latter role, she is responsible both for the production of electronic books and journals and for broadly developing the role of the Library in scholarly communication.

Janis Brown, Associate Director, Systems & Information Technology, Norris Medical Library, University of Southern California, has held various positions primarily related to technology and education in her 25 years with the university. She is the author of a book and four book chapters, and has presented nearly 40 papers and posters at professional meetings. Throughout her career she has been involved in information technology from the early days of Gopher as a campus wide information system to digital collection projects

Melitte Buchman serves as Digital Conversion Specialist in the Digital Library Program at NYU's Division of Libraries since 2003. She has been involved with digital imaging since 1999 and has been involved with photography in one form or another since age 10. In her current capacity she is responsible for digital imaging, color management, preservation video conversion. She is also responsible for quality assurance and technical metadata for both video and imaging. She is currently active in NYU's jpeg2000 implementation and development of open source production tools. Prior to coming to NYU she worked at The New York Public Library both in their Digital Library Program and Exhibition Department.

C

Priscilla Caplan is the Assistant Director for Digital Library Services at the Florida Center for Library Automation (FCLA), where she provides services to help the libraries of the public universities of Florida create, manage and preserve digital content. She oversees the operations of the FCLA Digital Archive and development of the DAITSS preservation repository application. She co-chaired the OCLC/RLG Working Group on Preservation Metadata: Implementation Strategies (PREMIS).

Robin Chandler is the Director of the Built Content Program for the California Digital Library which includes administering the Online Archive of California and the American West Project as well as coordinating frameworks to surface digital collections across the University of California Chandler has experience providing online access to digital content including tobacco industry documents at the UCSF Library and high-energy physics preprints at the Stanford Linear Accelerator Center (SLAC). Chandler holds masters degrees in Library Science (UC Berkeley) and American History (San Francisco State University).

John Chapman is Metadata Librarian in the Technical Services department of the University of Minnesota Libraries. He works closely with staff from Archives and Special Collections, the Digital Library Development Lab, and subject experts from across campus to create and enhance access to library resources. Previously, he worked at the Minnesota Historical Society as an archivist and as a researcher for web projects and services. He holds a M.L.I.S. from Dominican University and a B.A. in religion from Macalester College.

Aaron Choate (Digital Projects Librarian – University of Texas at Austin Libraries) has an MLIS and a BA in History from the University of Texas at Austin. He has worked within the Digital Library Services Division from the early days of its inception, playing a part in developing the Library's early web presences and to help develop the Library's digital service offerings. Aaron is currently responsible for managing the Digital Production Services unit and thus, is involved in providing digitization, video production and data archiving services to the University of Texas Libraries, Archives, collections and academic units. Among the initiatives that Aaron is currently working with are UTOPIA, the Texas Digital Library, and the Texas Heritage Digitization Initiative.

Karen Coyle is a librarian with nearly 30 years experience in digital libraries. She worked for over 20 years at the University of California in the California Digital Library, and now consults in areas of technology and policy for digital libraries. She is a recognized expert in digital library standards, metadata, and systems design, as well as a frequent author and speaker on social, political and policy issues. She has provided the profession with key thinking in the area of Digital Rights Management and copyright representation for digital materials. Her website is http://www.kcoyle.net.

Morgan Cundiff is a Senior Standards Specialist in the Network Development and MARC Standards Office at the Library of Congress. He is responsible for work on the METS and MIX metadata standards and is also a member of the technical team responsible for building METS-based digital library applications, including "Library of Congress Present: Music, Theater, and Dance" (http://www.loc.gov/lcp/) and the "Veterans History Project" (http://www.loc.gov/folklife/vets/vets-home.html). Before joining NDMSO five years ago he served in the Library of Congress National Digital Library Program where he was Project Leader for eight American Memory Music Division projects. Morgan has represented the Library of Congress on the METS Editorial Board since it was formed in 2001.

D

Michelle Dalmau is the Interface and Usability Specialist for the Indiana University Digital Library Program. Her research interests include the integration of complex metadata structures into browse and search functionality of online collections as well as pedagogic use of digital image resources. The many projects Michelle has contributed to include Film Literature Index, Charles W. Cushman Photograph Collection, and Letopis' Zhurnal'nykh Statei. Her undergraduate background is in English and Art History, and she holds a Master of Library Science and a Master of Information Science from Indiana University.

Tim DiLauro is the Digital Library Architect in the Library Digital Programs and Digital Knowledge Center of the Sheridan Libraries at Johns Hopkins University. Since 1982, he has worked for JHU in a variety of technology positions. He has been with the Sheridan Libraries since 1990. He has also worked as a consultant for several companies with Internet businesses. Since 1995, his project work has focused on designing systems to improve and simplify user access to information, including the development of access gateways and web proxies. His current work deals with the integration of multiple repositories with multiple services to support digital collections, learning, publishing, and preservation.

Jon Dunn is Associate Director for Technology in the Digital Library Program at Indiana University, overseeing the development and management of software systems to support IU's digital library collections. Prior to joining the Digital Library Program, he worked in the Cook Music Library at IU from 1994-1998 as Technical Director for the Variations digital music library project. He is currently serving as Project Director for IU's IMLS-funded Variations3 digital music library and learning system development project and chairs the DLF Aquifer Technology/Architecture Working Group.

E

Markus Enders is working as the technical head for the Digitization Centre at State and University Library Göttingen co-developing document management systems and capturing tools for the digitization process. Additionaly he has been involved in some preservations projects and is currently working in a common project with Cornell University Libraries (MathARC) to build a federated archive for mathematical journals.

F

Sharon E. Farb is the director of Digital Collection Management and Licensing for the UCLA Library. Sharon holds a J.D. and Ph.D. and her research and professional interests focus on the intersection of key policy issues affecting libraries, archives and cultural memory institutions including intellectual property, privacy and intellectual freedom. Sharon is a member of DLF sponsored Electronic Resource Management Initiative (ERMI1 and 2), the NISO License Expression Working Group and a member of the California Digital Library's Rights Management Group.

Hannah Frost preserves media collections at Stanford University Libraries and contributes to the planning and development of the Stanford Digital Repository's preservation services. She earned her MLIS from the Preservation and Conservation Studies program at the University of Texas at Austin School of Information in 2001.

Muriel Foulonneau is project coordinator at the University of Illinois at Urbana-Champaign for the CIC-OAI metadata harvesting project, an initiative for developing common best practices for sharing metadata among the CIC group of research universities in the U.S.A. She is part of the American Digital Library Federation and National Science Digital Library best practices expert group on the Open Archives Initiative and shareable metadata. She previously worked as an IT advisor for the French Ministry of culture and was a participant in Minerva project, a collaboration among European ministries of culture on digitization of cultural heritage resources. She also served as an expert for the European Commission for research projects related to digital heritage. She holds a degree from the National School of Library and Information Science in France.

G

Terri Geitgey is the Digital Projects Librarian at the University of Michigan University Library's Scholarly Publishing Office, where she serves as project manager for two large, long-term collaborative efforts, LLMC-Digital, and the ACLS History E-Book Project, as well as managing several smaller, one-off projects. She helped develop the library's Print-on-Demand reprint program, and is responsible for overseeing its day-to-day operation and expansion. Prior to her work at SPO, she served as project librarian for the grant-funded Flora and Fauna of the Great Lakes Region project, in the library's Digital Library Production Service department. She received a B.A. in English from the Ohio State University, and an M.L.S. from Indiana University.

Erik Grostic is a Senior Systems Analyst at the University of Texas at Austin, and has worked in the Digital Library Services Division of the University of Texas Libraries for approximately seven years. Current and previous projects include UTopia, the Archive of Indigenous Languages of Latin America (AILLA), the Robert Runyon Photography Collection, the Spanish Speaking Peoples of Texas and the Papers of Tom Clark.

Rebecca Guenther is Senior Networking and Standards Specialist in the Network Development and MARC Standards Office of the Library of Congress. She has worked at LC since 1980 in various positions and in her current position since 1989. Her current responsibilities include work on national and international information standards, primarily in the area of metadata. She has been instrumental in the development of MODS and PREMIS, and served as co-chair of the PREMIS Working Group. Other activities include maintaining a number of crosswalks between various metadata schemes, participating in the DLF Digital Registry Working Group, and serving as rotating chair of the ISO 639 Joint Advisory Committee on Language Codes.

H

Thomas G. Habing is a Research Programmer at the Grainger Engineering Library Information Center at the University of Illinois at Urbana-Champaign where for the past eight years he has worked on various digital library projects. In addition to his technical support for various ongoing OAI-PMH related projects at UIUC, including being the developer of the UIUC OAI Registry, Tom is a technical lead for the Library's NDIIPP ECHO DEPository grant project. Before the OAI-era, Tom was a lead developer on the Library's NSF funded Digital Library Initiative (DLI I) project, and the CNRI funded DLib Test Suite projects. Prior to returning to the Midwestern, U.S. in 1997, Tom was a Senior Computing Methods and Technology Engineer for The Boeing Company in Seattle, Washington, where he had been employed since 1986 doing systems analysis, programming, and graphical user interface design.

Kat Hagedorn is Metadata Harvesting Librarian at the University of Michigan Libraries. She is responsible for the OAIster project, a search gateway for OAI harvested records leading to digital objects, initially Mellon-funded in 2001-2002. Currently, she is working collaboratively on an Institute of Museum and Library Services (IMLS) project grant to research second generation OAI work. She is also responsible for Digital Library eXtension Service (DLXS) Bibliographic Class and its corresponding bibliographic collections. She was named a Library Journal Mover & Shaker in 2005. Her previous experience is in information architecture (with the Argus Associates firm) and ontology and taxonomy consulting (with the Food and Agriculture Organization in Rome).

Martin Halbert is Director for Library Systems at Emory University. He is currently a principal investigator on the NSF-funded Ockham Project, on DLF's IMLS-funded work to research, design, and prototype a "second generation" OAI finding system, and on two Mellon-funded metadata harvesting initiative projects. He also serves as executive director of the MetaScholar Initiative, a consortium of thirty institutions working to aggregate metadata for scholarly portal services. Martin serves as the chair of the LOCKSS sub-committee on Institutional Access Integration, and has there studied issues of low-cost library server networks and associated integration issues. He has served as editor of several library publication projects, and currently supervises a university library division of fourteen professional staff.

Margaret Hedstrom is an Associate Professor at the School of Information, University of Michigan where she teaches in the areas of archives, electronic records management, and digital preservation. She is a faculty Associate at the Inter-University Consortium for Political and Social Research (ICPSR) also at the University of Michigan. She was project director for the CAMiLEON Project, an international research project to investigate the feasibility of emulation as a digital preservation strategy. She is the principle author of It's About Time, a research agenda for digital preservation sponsored by the Library of Congress and the National Science Foundation. She is a the National Digital Strategy Advisory Board to the Library of Congress, the Advisory Committee on Historical Diplomatic Documentation, U.S. Department of State, and the American Council of Learned Societies, Commission on Cyber-Infrastructure for the Humanities and Social Sciences. Her current research project investigates incentives for data producers to create "archive-ready" data sets.

She has conducted more than 20 professional development workshops in the U.S., Canada, Cuba, Australia, New Zealand, South Africa, Sweden, the U.K. She has served as an expert consultant on electronic records management and digital preservation to many government archival programs, the World Bank, the International Council on Archives, and the Swedish Ministry of Culture. Before joining the faculty at the University of Michigan in 1995, she was Chief of State Records Advisory Services and Director of the Center for Electronic Records at the New York State Archives and Records Administration. She earned M.A. degrees in Library Science and History, and a PhD in History from the University of Wisconsin-Madison. Hedstrom is a Fellow of the Society of American Archivists and recipient of a Distinguished Scholarly Achievement Award from the University of Michigan for her work with archives and cultural heritage preservation in South Africa.

Geneva Henry is currently a distinguished fellow with the Digital Library Federation, working with the Abstract Services Framework working group to develop a framework of digital library services. The goal is to provide the community with a roadmap and a common reference vocabulary around which to organize collective attention to library services in a changing networked environment. Geneva is located at Rice University where she is the Executive Director of Rice's Digital Library Initiative. She joined Rice in 2000 and has served as co-PI on a number of grants, including the Travelers in the Middle East Archive (TIMEA), the Shoah Foundation Archives grant with the Mellon Foundation, the NSF Advanced Placement Digital Library NSDL grant, and a Hewlett Packard Philanthropy & Education Grant, "180 Terabytes of Unique History: Integrating Survivors of the Shoah Testimonies in the Rice Curriculum." From March 2002 through June 2005 she was also the temporary executive director for the Connexions project (http://cnx.org). In addition to chairing and serving on a number of committees at Rice, Geneva served as the General Chair for the ACM/IEEE Joint Conference on Digital Libraries (JCDL) in 2003, and has been a member of the Program Committee for JCDL 2004 - 2006. In 2005 she was the co-chair of the inaugural JCDL doctoral consortium and is a member of the 2006 doctoral consortium committee. She currently serves on a number of advisory boards and committees including the Apple Mac Learning Environment, the LOCKSS Technical Policy steering committee, the DSpace Governance Advisory board, the Texas Digital Library (TDL) Executive Steering Committee and the TDL Technical Steering Committee.

Prior to joining Rice, Geneva was a Senior I/T Architect and Program Manager with IBM, where she was involved in planning, managing, architecting, and developing a number of complex systems for the US Department of Defense, universities, and museums world-wide. Her career has included applied research in artificial intelligence (expert systems and natural language processing), text search, data modeling, complex systems and digital libraries at IBM, TRW and the RAND Corporation. Geneva received a BS in Computer Science from California State University, Los Angeles, a MA in Political Science from the University of Washington, and a BA in Political Science from the University of California, Santa Barbara.

Nancy J. Hoebelheinrich, Stanford University Libraries is Metadata Coordinator for the Digital Library Systems and Services department at the Stanford University Libraries / Academic Information Resources. In that capacity, Nancy coordinates metadata services for Stanford Libraries' digital production activities, digital repository development and implementation, and educational technology services. She has been a member of the METS Editorial Board since 2002 and is currently serving as co-chair. Nancy has been active in a number of information and educational technology specification efforts including that of PREMIS (for preservation metadata), and several of IMS Global specifications related to packaging, repository and resource list interoperability. She is currently involved with the IEEE Learning Technology Standards Committee's RAMLET project, and continues to monitor various groups working on practices related to the use of digital rights expression languages.

Deborah Holmes-Wong, Project Manager, Information Development and Management, University of Southern California has held various positions at the University of Southern California since she began her career there in 1987. She has spent the past five years involved in digital library initiatives as a project manager. She participated in ARL's Scholars Portal Project as one of USC's project managers. Her other projects have included planning and implementation of USC's colleciton information system for digital resources, openURL resolver and electronic resources management systems.

Barrie Howard is the program associate of the Digital Library Federation and has been with the organization for two years. Mr. Howard holds an M.S.L.S. degree from The Catholic University of America School of Library and Information Science. He is the project manager for the DLF Distributed Library: OAI for Digital Library Aggregation project, an Institute of Museum and Library Services 2004 National Leadership Grant for Libraries. Other responsibilities include oversight of communications, finances, planning for the semi-annual DLF Forums and other meetings, and Web content creation and maintenance.

J

Dazhi Jiao is a System Analyst and Programmer of the Digital Library Program and Library Electronic Text Resource Service (LETRS) at Indiana University. David has 5 years of experiences in software and web application development. He has actively involved in the design and implementation of several digital library collections at Indiana University as the key developer. David holds a Master's degree in Computer Science from Virginia Tech.

K

Christopher Kellen is the Head of Research & Development for Carnegie Mellon University Libraries, where he provides technical leadership for the university's digital library efforts. He is currently engaged in the development of software for the creation, processing, preservation, and presentation of the university's digital collections. His interests include system architecture, long term preservation of digital objects, open source software and workflows. Prior to his role with the Libraries, Chris developed simulation software for the semiconductor industry. He has a B.S. in computer science, M.S. in computer engineering, and entirely too many cats.

Shana Kimball has a MA in English Language and Literature from the University of Michigan. She joined the Scholarly Publishing Office of the University of Michigan University Library in 2005 as an Electronic Projects Editor, where she is responsible for managing the electronic publication of several academic journals and monographs. She also shares responsibility for the daily operations of the print services division.

Katherine Kott is the director of the DLF Aquifer Digital Library initiative. Her professional career has included experience in academic library systems, and in technical and public services. Prior to beginning her work with the Digital Library Federation in 2005, Kott was the head of cataloging and metadata services at Stanford University, where she is based. Before coming to Stanford, she led the implementation services department at Innovative Interfaces, Inc., coordinating the installation of systems at a wide range of libraries, including consortia. Katherine has pursued a theme of leveraging resources through collaboration in most of her work.

Ardys Kozbial is the Digital Projects Librarian at the University of California, San Diego. For ten years, she worked in architectural records collections in the Alexander Architectural Archive at The University of Texas at Austin, The Houghton Library at Harvard University, Payette Associates (an architecture firm in Boston), Harvard Real Estate Services at Harvard University and the Environmental Design Archives at the University of California, Berkeley. For four years, she shifted to the broader world of visual resources, serving as the Visual Resources Librarian at Harvard's Graduate School of Design and a Metadata Librarian for the Union Catalog for Art Images (UCAI) project at UCSD. Her current job is leading her into the uncharted waters of digital preservation.

She is a frequent speaker at annual conferences for the Society of American Archivists, the Art Libraries Society of North America (ARLIS/NA) and the Visual Resources Association (VRA). Ardys is a former co-chair of the SAA Architectural Records Roundtable and the current Vice Chair of the SAA Visual Materials Section.

John Kunze is a preservation technologist for the California Digital Library and has a background in computer science and mathematics. His current work focuses on archiving Web sites, creating long-term durable digital references (ARKs) to information objects, and specifying lightweight (kernel) metadata. Prior work includes major contributions to the standardization of URLs, Dublin Core metadata, and the Z39.50 search and retrieval protocol. In an earlier life he designed, wrote, and ran UC Berkeley's first campus-wide information system, which was an early rival and client of the World Wide Web. Before that he was a BSD Unix hacker whose work survives in today's Linux and Apple systems.

L

Bill Landis, currently metadata coordinator at the California Digital Library, received his archival training and MLIS from the University of Michigan in 1994. He served as the first production coordinator for JSTOR in 1996-1997, and as manuscripts librarian in Special Collections and Archives at the University of California, Irvine from 1998-2004.

Dyung Le is the Systems Engineering Division Director and has the responsibility for the development of ERA requirements, specifications, Concept of Operations and the Analysis of Alternatives design models as they relate to meeting NARA lifecycle information requirements and for all technical aspects of the ERA program throughout its software development lifecycle, from requirements, architecture, design, integration, testing and deployment. The ERA program will authentically preserve and provide access to any kind of electronic record, free from dependency on any specific hardware or software, enabling NARA to carry out its mission into the future. Mr. Dyung Le has a long career in the design of symmetric multiprocessing supercomputer, compiler for multi-threaded systems, broadband interactive multimedia and Business Intelligence. He holds a MS and a BS in Electrical Engineering and Computer Sciences, and a BS in Applied Mathematics from the Massachusetts Institute of Technology.

Bill LeFurgy is Digital Initiatives Project Manager with the Library of Congress Office of Strategic Initiatives. He manages projects for the National Digital Information Infrastructure and Preservation Program (NDIIPP). These efforts include overseeing advanced digital preservation projects, guiding research on improved methods for long-term management of digital materials, and working with government agencies, private corporations, professional organizations, and other stakeholders. Prior to joining LC in 2002, Bill served as Deputy Director of Modern Records Programs with the National Archives and Records Administration. He worked for the National Archives over the course of 12 years in areas such as electronic records archiving, records appraisal, and management. He worked extensively with many federal agencies in developing strategies for the long-term management and preservation of permanent records, particularly those in electronic form.

Alisha Little is the Metadata Analyst for the University of Texas Libraries at the University of Texas at Austin. She coordinates metadata creation/capture, selection and dissemination for digital projects in both the Libraries and across campus. Along with programmer Erik Grostic, she heads the development of the Metadata Registry project at UT. She also serves on two state-wide metadata development groups: the Texas Digital Libraries (TDL) Metadata Group and the Texas Heritage Digitization Initiative (THDI), which are both in the process of developing standards and best practices for statewide metadata and resource sharing projects. She has a BA in English from the University of Montana and an MS in Information Studies from UT-Austin.

Tamara Lopez is the Programmer Analyst for the Chymistry of Isaac Newton, a digital edition of Isaac Newton's alchemical writings, where she is responsible for designing and developing web software for manuscript access, retrieval and display. Previously she worked as a developer on non-profit and commercial web sites, most recently as an E-Commerce Specialist for the Irish airline Aer Lingus. She holds a B.S. in Theatre Performance, and is currently pursuing dual Masters degrees in library and information science at Indiana University.

Emily Lynema is an NCSU Libraries Fellow at North Carolina State University. She served as lead developer for the recent Endeca implementation at NCSU, which provides faceted keyword searching for the library catalog. She heads the product team that manages integration of this application with other NCSU Libraries tools and services and is conducting related usability testing. In the other half of her job, she helps solve user information puzzles at the reference desk and works with the management of online information literacy tutorials.

Lynema received the Master of Science in Information from the University of Michigan in 2005. She gave a presentation at the 2004 OCLC Reference Services Advisory Committee meeting discussing reference services for the next generation. She is also an ALA LITA member.

M

Lee Mandell is the Design Team Manager for the Archivists' Toolkit project. He received a B.S. in Computer Science from Northeastern University in 1987. He has spent 16 years working with museums, libraries and archives focusing on visual and archival collections management systems. He also spent 7 years working in the pre-press industry helping develop image manipulation tools as well as managing digital work flows. He is also a visual artist focusing on photography and sculpture.

Ellen Meltzer recently assumed the position of Information Services Manager at the California Digital Library (CDL). She is responsible for overseeing user services, education and outreach, analysis and specifications, help, and guidance for products used and managed by the CDL. Her group provides analysis and specifications for projects in conjunction with the web development and service design groups and develops these for new and emerging services. Prior to this position, she served as Senior Associate for Education, Usability and Outreach at the CDL. She came to the CDL from the UC Berkeley Library in 2001, where she was Director of the Teaching Library.

David Millman is the Director of Systems Integration in the Columbia University Information Technology organization. He is responsible for University-wide technology planning and operations for identity management, learning management and content management services, as well as several digital library projects at the Electronic Publishing Initiative at Columbia (EPIC) in the University Libraries. His recent work concerns scalable architectures for distributed services and for access-control systems, including those that span institutional boundaries. His group is part of the Core Integration team of the NSF National Science Digital Library (NSDL) program.

David has developed and managed Internet-based services since the late 1980's, including public information systems, reference book databases, art museum collections, and electronic scholarly publications. A software developer since 1974, he has taught computer graphics and programming in higher education and in industry. David has been a member of the technical staff at Columbia University since 1980.

Catherine Mitchell is the Manager of Publishing Services in the Office of Scholarly Communication at the California Digital Library (CDL). As such, she develops digital publishing solutions both for the scholarly monograph and for specific textual encoding efforts such as the Mark Twain Project. Prior to arriving at the CDL in January, Catherine was a visiting assistant professor of English literature at Mills College in Oakland. Before assuming her position at Mills, she was the web director at the Commonwealth Club of California in San Francisco.

Eva Müller is a librarian at Uppsala Universitet Library (UUL), Sweden and the Director of its Electronic Publishing Centre (EPC). She has been active in planning and developing of library information services at UUL since 1993. As Head of the Information Development Department she was in charge of Uppsala University Library's digital library program.

Since 2000 Eva has run the everyday work of the EPC and supervises its Research and Development group. Her current work and research interest is in the field of electronic publishing and repositories and focuses on the development of an integrated infrastructure supporting long-term preservation and access to digital published materials. Eva graduated from Charles University in Prague with a degree in Information Science and Librarianship.

N

Michael Nelson is an assistant professor of Computer Science at Old Dominion University in 2002. He worked at NASA Langley Research Center from 1991-2002. Through a NASA fellowship, he spent the 2000-2001 academic year at the School of Information and Library Science, University of North Carolina at Chapel Hill. He is a co-editor of the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) and has developed many digital libraries, including the NASA Technical Report Server. His research interests include repository-object interaction and digital preservation.

David Newman is a Research Scientist in the Department of Computer Science at the University of California Irvine. His research areas include text mining, machine learning and probabilistic modeling. He holds a Ph.D. in Engineering from Princeton University and an M.S. in Computer Science from UC Irvine.

Quyen Nguyen is currently working in the Systems Engineering Division of the ERA Program Management Office at the U.S. National Archives and Records Administration. Before joining the National Archives, he has worked for telecommunications software companies. His experience is in developing software systems for large scale deployment. He has a BS in Computer and Information Science and Applied Mathematics from the University of Delaware and a M.S. in Computer Science from the University of California at Berkeley.

O

Rick Ochoa developed many systems in the private sector before working at NYU. Notably: Time Life Books, Callaway Golf Media Ventures, The New York Times Electronic Media Company, and The Nation Magazine. He then began developing systems, coding workflow utilities, and content repositories for the ISV IMAGE Inc. and had a short run as SA/Database Admin for MarsMusic.com before the parent company folded. In 2001 he wound up at New York University, and currently codes the Database of Recorded American Music, a METS compliant ZeroDB implementation (http://dram.nyu.edu) and works with Tom Cunningham on integrating Darwin Streaming Server and Shibboleth.

John Mark Ockerbloom is a digital library architect and planner for the University of Pennsylvania Library. He received a Ph.D. in computer science from Carnegie Mellon. His areas of interest include digital preservation, digital repositories, distributed knowledge bases, information discovery, and enhancing open access to information. He has been developing and supporting online information registries since the early 1990s, covering areas including open-access texts, file format documentation and services, and copyright information.

P

Andrew K. Pace is Head of Information Technology at NCSU Libraries, where he has participated in several successful initiatives, including a major ILS migration, E-Book integration, web interface design, a laptop lending program, and has led development of NCSU Libraries' ERM system and faceted browse online catalog. Prior to NCSU, Pace was a product manager for library vendor, Innovative Interfaces. Pace is an at-large member of the LITA Board and active in NISO standards development. Pace is a frequent speaker and writer on several library topics. He is the "Technically Speaking" columnist for American Libraries magazine. Pace was recently named a 2006 Frye Leadership Institute Fellow.

Michael Pelikan has been Librarian to the Penn State School of Information Sciences and Technology (now College of...) since his arrival fresh out of Library School in September 2000. During that time he has been involved in a number of projects in his capacity as Technology Initiatives Librarian as well. These include the Libraries' Visual Information Users Study (VIUS), prototyping of methods and standards for the Libraries' digital monograph projects, and membership on the metadata team for the Libraries' RFP process and implementation of the Day Communique' content management system.

He also has continuing involvement in the Penn State Taxonomic Tags Group, a university-level group working to improve develop improved control and predictability of web search results across the million-page Penn State University web presence. He was a contributing member on the Vocabulary Definitions and Exchange (VDEX) standard, (version 1) of the IMS Global Learning Consortium. He has served as editor of the Digital Library Federation Newsletter since 2003. Prior to receiving his MLIS from the University of Rhode Island, Pelikan enjoyed a sixteen-year career in public radio and television.

Mr. Pelikan's fourteen years in Alaska included duties as Press Secretary to Mayor John Devens of Valdez, Alaska during the 1989 Exxon Valdez oil spill disaster, and culminated in three years with Alaska Pacific University, the last two years as Director of APU's Academic Resource Center.

Felicia Poe joined the University of California, California Digital Library (CDL) in 2001, and assumed leadership of the newly established CDL Assessment Program in 2005. She is responsible for integrating assessment and evaluation activities into all stages of the project and service lifecycle, ranging from early stage focus groups, to mid-stage user interface usability testing, to post-launch service reviews. Other areas of interest include market research, search technologies, and information services design.

Rick Prelinger (http://www.prelinger.com), an archivist, writer and filmmaker, founded Prelinger Archives, whose collection of 51,000 advertising, educational, industrial, and amateur films was acquired by the Library of Congress in 2002 after 20 years' operation. He sat on the National Film Preservation Board as representative of the Association of Moving Image Archivists and is Board President of the Internet Archive and the San Francisco Cinematheque, and Acting Director of the Open Content Alliance. His feature-length film "Panorama Ephemera," depicting the conflicted landscapes of 20th-century America, opened in summer 2004. He is co-founder of the Prelinger Library (http://www.prelingerlibrary.org), an appropriation-friendly reference library located in San Francisco.

Merrilee Proffitt has been a Program Officer at RLG since 2001. She serves as a liaison with RLG member community on a variety of programmatic endeavors within RLG's research resources community, and is involved in digital library standards work (such as the Text Encoding Initiative, the Metadata Encoding & Transmission Standard, and Encoded Archival Description). Current projects include working on RLG's programmatic activities around web archiving, and providing leadership and support for workgroups associated with the Open Content Alliance. Prior to her work at RLG, Merrilee managed digital library projects at UC Berkeley.

R

William Reilly joined the MIT Libraries' Digital Library Research Group (DLRG) two years ago as Technical Analyst and Project Manager of the MIT iCampus project CWSpace, archiving MIT's OpenCourseWare (OCW) to DSpace. After taking his M.L.I.S. from the University of California at Berkeley, William's career has involved technical management and development in electronic publishing, software development firms, and technology consulting for web development for Fortune 500 companies, prior to this current position in academic digital library research.

David Reynolds is the Metadata Librarian for The Sheridan Libraries of The Johns Hopkins University and serves on the Metadata Working Group for the DLF Aquifer Digital Library initiative. Previously he held various cataloging positions at Johns Hopkins University, Arizona State University, and Trinity University. Current projects include metadata analysis for the Hopkins Institutional Repository and the Mellon-funded Roman de la Rose Digital Medieval Manuscripts projects. As a salute to his Texas roots, David often refers to himself as the Data Wrangler.

Jenn Riley is the Metadata Librarian with the Indiana University Digital Library Program, where she is responsible for planning metadata strategy for digital library projects and participates in the collaborative design of digital library systems. Much of her recent effort has been working towards the cost-effective creation of "shareable" metadata, promoting re-use of descriptive metadata in new and unanticipated environments. She was a major contributor to the emerging metadata guidelines from DLF and NSDL, the Best Practices for OAI Data Provider Implementations and Shareable Metadata and the DLF MODS Implementation Guidelines for Cultural Heritage Materials . Jenn's research interests also include the incorporation of thesaurus structures into search and browse systems, music digital libraries, and FRBR. Jenn is the author of the blog Inquiring Librarian , where her posts frequently center around improving intellectual access to library materials. In addition to an M.L.S from Indiana University, she holds a B.M. in Music Education from the University of Miami (FL) and an M.A. in Musicology from Indiana University.

Perry Roland is the Production Coordinator for the Digital Library Production Service at the University of Virginia Library. Previously, he was employed in the Library's Research and Development Group, planning and implementing the Library's Fedora repository. Perry is the developer of the Music Encoding Initiative (MEI) DTD.

David Ruddy is Head of Systems Development and Production at Cornell University Library's Center for Innovative Publishing (CIP -- http://cip.cornell.edu). Since 2000, he has been closely involved with the design and development of DPubS, the technical infrastructure that supports Project Euclid, the Library's first electronic publishing initiative. He currently directs the Open Source development and extension of DPubS (http://dpubs.org) and manages the production environment for CIP e-publishing efforts. He has worked with SGML and XML applications and systems for many years, both in the area of humanities text computing and metadata services. He holds an M.A., M.S., and Ph.D., all from the University of Michigan.

S

Robert Sanderson is currently a lecturer in Computer Science at the University of Liverpool. He completed his interdisciplinary Ph.D. in Information Science and Medieval French in 2003, and he has been working on the Cheshire Information Retrieval System in conjunction with the University of California, Berkeley since 2000. He is the Senior Editor for the SRW/U protocol specification.

David Seaman is Executive Director of the Digital Library Federation. Prior to that he was the founding director of the Electronic Text Center at the University of Virginia Library (1992-2002), a humanities digital library of texts and images. David Seaman holds a B.A. in English Studies from the University of East Anglia, Norwich (1984), an M.A. in Medieval Studies from the University of Connecticut (1986), and has an incomplete Ph.D. in Medieval English at the University of Virginia. For the past ten years he has taught etext and Internet courses in the annual Rare Book School at the University of Virginia. His published work includes studies of Chaucer, and he speaks and writes frequently on various aspects of humanities computing.

Tracy Seneca is the Web Archiving Coordinator for the Web-at-Risk NDIIPP grant at the California Digital Library. She earned an MLIS at UC Berkeley in 1995, and a Master of Arts in Applied Technology at DePaul University, Chicago in 2004. She has designed systems for tracking copyright clearance for electronic reserves and for delivering online research instruction for libraries. Within the last three years she has been a graduate student, faculty member, bibliographer and web developer, and so brings a rich range of perspectives to design work.

Gary Shawver is a Faculty Technology Specialist at New York University. He has been a member of its Metadata Working Group for five years and is presently a member of the DLF Aquifer Metadata Working Group.

Sarah Shreeves is Coordinator for the Illinois Digital Environment for Access to Learning and Scholarship (IDEALS) at the University of Illinois at Urbana-Champaign (UIUC). Her experience with the Open Archives Initiative Protocol for Metadata Harvesting is grounded in both the IMLS DCC project and the Mellon-funded OAI Metadata Harvesting Project (2001-2002) at UIUC where she worked as a graduate assistant and project coordinator. Prior to coming to UIUC, Sarah worked for nine years in the MIT Libraries in Boston. She has a BA in Medieval Studies from Bryn Mawr College, an M.A. in Children's Literature from Simmons College, and an M.S. in Library and Information Science from UIUC.

Thornton Staples is currently the Director of Digital Library Research and Development at the University of Virginia Library and is the Project Director for the Fedora Project. Previous positions include: Chief, Office of Information Technology at the National Museum of American Art, Smithsonian Institution; Project Director at the Institute for Advanced Technology in the Humanities, University of Virginia; and Special Projects Coordinator, Academic Computing at the University of Virginia.

T

Barbara Taranto is the Director of the Digital Library Program at The New York Public Library. She is responsible for overseeing all activities related to digital collections which includes the Digital Imaging Lab, the development of HADES, the Library's Digital Asset Management System, the establishment of DDR, the Library's Digital Data Repository, the creation of the web content application interface (WAP) and several large scale publicly accessible research resources including NYPL DigitalGallery (430,000 pictorial/graphic items) and the African American Migration Experience electronic monograph (30,000 items). In addition, Ms. Taranto is lead program officer for the Library's National Digital Newspaper Project (NDNP) funded and supported by a partnership with the Library of Congress and the National Endowment for the Humanities. She is an active member of the Digital Library Federation, the Coalition for Networked Information and the Metropolitan Library Association and is currently working on a book titled The Digital Tithe.

Brian Tingle has worked for the University of California Libraries developing web based applications since 1996. He has been a user of Melvyl, the on-line catalog of the UC Libraries, since 1987, when he would often spend Saturdays or Sundays in the UC Riverside Libraries preparing for high school public speaking competitions, exploring new features of the catalog, and providing rouge computer support to patrons and staff. Since 2001 he has worked at the California Digital Library, where he is involved with technology and resource planning and systems development. His development work has been focused on ingest, access, and discovery systems for digital artifacts described by Metadata Encoding and Transmission Standard (METS) Documents. He has been a member of the METS Editorial Board since 2002 and is currently serving as co-chair.

Nate Trail has worked at the Library of Congress for 14 years in a variety of database and web programming positions. For the past four years he has been a Digital Project Coordinator in the Network Development and MARC Standards Office. He develops tools to integrate bibliographic, processing, and rights metadata in databases with web presentations of digital objects, primarily on the Veterans History Project and The Library of Congress Presents: Music, Theater and Dance web sites. He designs and prototypes METS profiles for digital objects and creates behaviors for their display online, in addition to participating in standards development for online serials.

Nate earned his Masters in Library and Information Science at Louisiana State University in Baton Rouge, and a BS in Business Administration at Houghton College in western New York.

Denise Troll Covey, Principal Librarian for Special Projects, is responsible for conducting research to inform library administration and strategic planning. She keeps abreast of technological developments, their social implications, and the laws, policies, practices, and standards relevant to digital libraries. Her current projects are analyzing the Copyright Office's recommendations regarding orphan works, participating in the discussion of possible amendments to section 108 of the copyright law, and conducting a study of scholarly communication practices among Carnegie Mellon faculty. Her previous research, designed to increase the success and lower the cost of acquiring copyright permission to digitize and provide open access to books, was published by the Council on Library Information Resources in 2005. Ms. Covey serves on the National Information Standards Organization (NISO) Standards Development Committee where she is leading the initiative to develop rights expression and management for scholarly information. She was a Distinguished Fellow in the Digital Library Federation in 2000-2001.

Sara Tompson has been a physical sciences and/or engineering librarian for 19 years, and currently serves as Team Leader in the Science & Engineering Library at the University of Southern California. She is proud to have been involved digital libraries from the first days of Web browsers at the University of Illinois. In addition to numerous articles, she coauthored with Elizabeth Eastwood "Digital Library Services: An Overview of the Hybrid Approach." in the 8th edition (2000) of the ASLIB (UK) _Handbook of Information Management_ in 2000.

V

Herbert Van de Sompel graduated in Mathematics and Computer Science at Ghent University, and in 2000, obtained a Ph.D. there. For many years, he was Head of Library Automation at Ghent University. After having left Ghent in 2000, he has been Visiting Professor in Computer Science at Cornell University, and Director of e-Strategy and Programmes at the British Library. Currently, he is the team leader of the Digital Library Research and Prototyping Team at the Research Library of the Los Alamos National Laboratory. The Team does research regarding various aspects of scholarly communication in the digital age, including information infrastructure, interoperability, digital preservation and indicators for the assessment of the quality of units of scholarly communication. Herbert has played a major role in creating the Open Archives Protocol for Metadata Harvesting, the OpenURL Framework for Context-Sensitive Services, the SFX linking server, and the "info" URI.

Jason Varghese is a programmer/anaylst for the digital library program at New York University where he is currently working on the Archivists' Toolkit project. Pror to joining NYU, Jason was the senior developer and lead programmer for the Health Education Assets Library, which is a component of the National Sciences Digital Library. Jason has his B.S. degree in computer engineering from the University of Oklahoma and is completing his MBA from the University of Central Oklahoma.

W

John Walsh is the Associate Director for Projects and Services of the Indiana University Digital Library Program, where he coordinates the activities of the program and manages select projects and initiatives. He has been working with digital text and image collections and other digital library content creation and delivery for over ten years. His main area of expertise is in the development of XML full-text literary and humanities digital collections.

Current projects include The Swinburne Project, a digital collection of the works of nineteenth-century British poet Algernon Charles Swinburne; the Chymistry of Isaac Newton, a digital edition of Isaac Newton's alchemical writings; and CBML, or Comic Book Markup Language, a TEI-based XML vocabulary for encoding comic books and graphic novels. He has a Ph.D. in English literature and is active in the digital humanities field, researching the application of XML-related technologies to the preservation, presentation, and analysis of literary texts and pop culture media.

Jewel Ward is the Program Manager for the University of Southern California Digital Archive. Her duties include Operational/Technical Management and some R&D. She holds both an A.B. with a double major in International Studies and History and an M.S.I.S. from the University of North Carolina at Chapel Hill. Her master's work focused on Information Systems; for her master's paper topic, she analyzed which Dublin Core Metadata Elements were and were not used by registered OAI-PMH-compliant Data Providers. Prior to USC, she worked in the Research Library at Los Alamos National Laboratory as a Graduate Research Assistant. Jewel has a background in networking and internet technology due to employment as a NetOps Senior Analyst, a Business Analyst, Techwriter and Webmistress at a now-defunct dot com and two now-defunct data communications companies. An analyst by nature, her subject areas of interest include database applications, information search and retrieval, online information services, project and people management, and, of course, digital libraries.

Perry Willett is the Head of the Digital Library Production Service (DLPS) at the University of Michigan. DLPS is responsible for digital content creation at the University of Michigan libraries, and software development for DLXS, the digital library system. In addition to his work in digital libraries, he has served as a bibliographer and reference librarian at Indiana University, SUNY-Binghamton and Columbia University. He has graduate degrees in Comparative Literature and Library Science from Rutgers University.

Robert Wolfe received his MLIS from Simmons College, where he focused is study on digital libraries. While at Simmons he worked for Digital Learning Interactive, developing metadata systems (LOM and IMS_CP) for the Interactive Learning Resource Network (iLRN), a repository of learning objects. He currently runs the Metadata Services Unit in the MIT Libraries, providing metadata consulting and production support for digital publishing projects at MIT.

Bradley D. Westbrook is the Metadata Librarian and Digital Archivist at the University of California, San Diego, and Project Manager and Lead Analyst for the Archivists' Toolkit project. Prior positions include Manuscripts Librarian and University Archivist at UCSD, Exhibits Curator at Columbia University, and Rare Books Librarian at Kent State University. He received his MLS from UCLA and an MA in English from SUNY-Albany. He has been active in RBMS and SAA and is currently a member of the SAA Technical Subcommittee for Descriptive Standards. He has given numerous presentations on archives and special collections. Publications include "Prospecting Virtual Collections," Journal of Archival Organization, (Vol. 1, no.1) 2002:73-80 ; and "The Archivists' Toolkit: Another Step Toward Streamlined Archival Processing," Journal of Archival Organization (forthcoming issue).

Y

Mohamed Yakout joined the Bibliotheca Alexandrina (BA) since June 2001 and is currently Head of the Database Administration Unit of BA's ICT Department and team leader of the Library Information System Administrators (LISadmins). He is currently Technical Project Leader of the Digital Assets Repository (DAR) of BA. He was also Technical Project Leader of the President Nasser Collection digitization project and was responsible for the administration and maintenance of the Virtua system of VTLS, which is the database system for the Library bibliographic collections. Moreover, he was responsible for designing and supervising the implementation of all applications to be integrated with the Virtua ILS. Examples include the external bibliographic records conversion system, the membership system, and the Library pre-paid card system.

Yakout received his B.Sc. in Computer Sciences & Automatic Control from Alexandria University with highest honors and distinction in 2001, and is expected to complete his Masters Degree by the summer of 2006. His fields of interest include data mining, digital libraries and information retrieval.

APPENDIX A: WHAT IS DLF?

What is DLF? The Digital Library Federation (DLF) is a leadership organization that pioneers the use of electronic-information technologies to extend library collections and services. Through its strategic partners and allies, DLF provides leadership to libraries broadly by

- identifying standards and "best practices" for digital collections and network access
- coordinating leading-edge research, development, and delivery
- incubating projects and services that libraries need but cannot develop individually

How does DLF operate? DLF consists of an Executive Director, a small staff, an Executive Committee, and a Board of Trustees on which each partner institution is represented. The bulk of its work on many initiatives is performed by working groups of its partners and others in the scholarly, library, and computing communities. DLF brings together experts from across disciplines and industries. The Council on Library and Information Resources (CLIR) is the administrative home to DLF.

DLF Strategic Partners contribute annually to DLF's operating budget and pledge funds over five years to its Capital Fund. Each member institution has a seat on the Board of Trustees and the responsibility to help direct the organization. The current Strategic Partners are as follows:

Bibliotheca Alexandrina
British Library
California Digital Library
Carnegie Mellon University
Columbia University
Cornell University
Council on Library and Information Resources
Dartmouth College
Emory University
Harvard University
Indiana University
Johns Hopkins University
Library of Congress
Massachusetts Institute of Technology
National Archives and Records Administration
New York Public Library
New York University
North Carolina State University
Pennsylvania State University

APPENDIX A (continued)

Princeton University
Rice University
Stanford University
University of California, Berkeley
University of Chicago
University of Illinois at Urbana-Champaign
University of Michigan
University of Minnesota
University of Pennsylvania
University of Southern California
University of Tennessee
University of Texas at Austin
University of Virginia
University of Washington
Yale University

DLF Allied Partners are organizations working in proximate areas. A senior officer from each allied organization sits on the DLF Board of Trustees "with voice but without vote." The Allied Partners are:

Coalition for Networked Information (CNI)
Joint Information Systems Committee (JISC)
Los Alamos National Laboratory Research Library (LANL}
OCLC Online Computer Library Center, Inc. (OCLC)
RLG

DLF Staff maintain the Executive Director's office and are responsible for setting program goals and priorities, facilitating and supporting DLF initiatives, managing communications, and administering finances and the work of the governing Board. The central office staff includes:

Executive Director: David Seaman (dseaman@clir.org)
Program Associate: Barrie Howard (bhoward@clir.org)
Administrative Associate: Christie Hartmann (chartmann@clir.org)

What does DLF provide?

Leadership and support for new research, standards development, and project start ups. Notable successes include OAI, METS, the Registry of Digital Masters, and the Electronic Resources Management Initiative (ERMI).

APPENDIX A (continued)

A semi-annual Forum to report on developments, standards, and projects, to plan new areas of collaborative endeavor, and to allow members to share experiences and find new colleagues.

E-mail discussion lists to exchange information, announce initiatives, identify resources, and stimulate discussion.

A Web site (http://www.diglib.org/) to provide public access to information about activities, resources, developments, and DLF itself.

Periodic newsletters and a pair of online databases to provide access to digital collections available from DLF members, and digital library documentation (policies, strategies, working papers, standards, and technical documentation).

Publications for reporting on research and conferences, the progress of initiatives, and on members' digital-library services, collections, projects, and challenges.

Multiple partnership opportunities, a sense of community and shared vision, and an opportunity to collaborate with a rich array of digital library practitioners and theorists.

For more information, contact:

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The Digital Library Federation
Council on Library and Information Resources
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Washington, DC, 20036
dlf@clir.org
www.diglib.org

APPENDIX B: RECENT DLF PUBLICATIONS

Acquiring Copyright Permission to Digitize and Provide Open Access to Books. Denise Troll Covey. Washington, D.C.: Digital Library Federation, Council on Library and Information Resources, 2005. http://purl.oclc.org /dlf/trollcovey0509.

What are the stumbling blocks to digitization? Is copyright law a major barrier? Is it easier to negotiate with some types of publishers than with others? To what extent does the age of the material influence permission decisions? This report, by Denise Troll Covey, principal librarian for special projects at Carnegie Mellon University, responds to many of these questions. It begins with a brief, cogent overview of U.S. copyright laws, licensing practices, and technological developments in publishing that serve as the backdrop for the current environment. It then recounts in detail three efforts undertaken at Carnegie-Mellon University to secure copyright permission to digitize and provide open access to books with scholarly content.

*A **Kaleidoscope of Digital American Scholarship.*** Martha L. Brogan, with assistance from Daphnée Rentfrow. Washington, D.C.: Digital Library Federation, Council on Library and Information Resources, 2005. http://www.diglib.org/pubs/2005brogan/.

This report will be useful to anyone interested in the current state of online American literature resources. Its purpose is twofold: to offer a sampling of the types of digital resources currently available or under development in support of American literature; and to identify the prevailing concerns of specialists in the field as expressed during interviews conducted between July 2004 and May 2005. Part two of the report consolidates the results of these interviews with an exploration of resources currently available. Part three examines six categories of digital work in progress: (1) quality-controlled subject gateways, (2) author studies, (3) public domain e-book collections and alternative publishing models, (4) proprietary reference resources and full-text primary source collections, (5) collections by design, and (6) teaching applications. This survey is informed by a selective review of the recent literature.

Electronic Resource Management: A Report of the DLF Initiative. Timothy D. Jewell, Ivy Anderson, Adam Chandler, Sharon E. Farb, Kimberly Parker, Angela Riggio, and Nathan D. M. Robertson. Washington, D.C.: Digital Library Federation, 2004. http://www.diglib.org/pubs/dlfermi0408/.

APPENDIX B (continued)

As libraries have worked to incorporate electronic resources into their collections, services, and operations, most have found their existing Integrated Library Systems to lack important functionality to support these new resources. An earlier study (Jewell 2001) determined that a number of libraries had begun developing local systems to overcome these shortcomings, and the DLF Electronic Resource Management Initiative (ERMI) was organized to aid the rapid development of such systems by providing a series of interrelated documents to define needs and to help establish data standards.

Digital Library Content and Course Management Systems: Issues of Interoperation. A Report of a study group funded by the Andrew W. Mellon Foundation, and co-chaired by Dale Flecker, Associate Director for Planning & Systems, Harvard University Library, and Neil McLean, Director, IMS Australia. Washington, D.C.: Digital Library Federation, 2004. http://www.diglib.org/pubs/cmsdl0407/.

An ad hoc group of digital librarians, course management system developers, and publishers met under the aegis of the Digital Library Federation to discuss the issues related to the use of digital library content in course management systems. The size, heterogeneity, and complexity of the current information landscape create enormous challenges for the interoperation of information repositories and systems that support course instruction. The group has created a checklist of things that operators of digital content repositories can do to help ameliorate the complexities of such interoperation. It also explored through the means of use cases the utility of tools which help instructors gather information resources from various distributed information repositories for teaching purposes, and created a model of how the group envisions the interaction of users, tools, and information repositories in the future.

A Survey of Digital Library Aggregation Services. Martha L. Brogan. Washington, D.C.: Digital Library Federation, 2003. http://www.diglib.org/pubs/brogan/.

This report, commissioned by the DLF, provides an overview of a diverse set of more than thirty digital library aggregation services, organizes them into functional clusters, and then evaluates them more fully from the perspective of an informed user. Most of the services under review rely wholly or partially on the Protocol for Metadata Harvesting of the Open Archives Initiative (OAI-PMH).

APPENDIX B (continued)

Each service is annotated with its organizational affiliation, subject coverage, function, audience, status, and size. Critical issues surrounding each of these elements are presented in order to provide the reader with an appreciation of the nuances inherent in seemingly straightforward factual information, such as *audience* or *size*.

Archiving Electronic Journals: Research Funded by the Andrew W. Mellon Foundation. Edited, with an Introduction, by Linda Cantara. Washington, D.C.: Digital Library Federation 2003. http://www.diglib.org/preserve/ejp.htm.

Increasingly, scholarly journals are published electronically. What does it take to keep them accessible electronically in perpetuity? Can the property rights of publishers, the access responsibilities of libraries, and the reliability assurances that scholars need be reconciled in agreements to create archives of electronic journals? These series of studies from seven major libraries examine various aspects of the challenges of archiving electronic journal content.

An Introduction to *Dimensions and Use of the Scholarly Information Environment*. Amy Friedlander. Washington, D.C.: Digital Library Federation, Council on Library and Information Resources, 2003. http://www.clir.org/pubs/reports/pub110/contents.html.

659 Data Tables for *Dimensions and Use of the Scholarly Information Environment.* Washington, D.C.: Digital Library Federation, Council on Library and Information Resources, 2003. http://www.diglib.org /pubs/scholinfo/.

We know from anecdotal evidence that users' expectations of libraries are changing as they find more information directly from the Web, but anecdotes are an insufficient basis for developing new library services. DLF and CLIR commissioned Outsell, Inc. to conduct a large-scale study to give us a much more reliable picture of user behaviors. Published here are the 659 data tables that record the responses to 35 groups of questions asked of 3,200 undergraduates, graduate students, and faculty members from academic institutions ranging from small liberal arts colleges to the largest public and private research universities. Accompanying them is a summary of the findings and 158 selected data tables; it should be viewed as an entry to the much larger data set of 659 data tables provided above.

APPENDIX B (continued)

The Digital Library: A Biography. Daniel Greenstein & Suzanne E. Thorin**.** Washington, D.C.: Digital Library Federation, Council on Library and Information Resources, 2002. http://www.clir.org/pubs/abstract /pub109abst.html.

Digital libraries, once project-based and largely autonomous efforts, are maturing. As individual programs have grown, each has developed its own personality, reflecting the circumstances of its creation and environment, and its leadership. This report from CLIR and the DLF draws on the results of a survey and case studies of DLF members to reveal how these influences have molded a range of organizational forms that we call the digital library. The report is written by Daniel Greenstein and Suzanne Thorin. Greenstein, formerly the director of the DLF, is now university librarian and director of the California Digital Library. Thorin is the dean of university libraries at Indiana University. *Section One* of the report examines three stages of digital library growth: the young digital library, the maturing digital library, and the adult digital library. *Section Two* of the report presents case studies of digital library development at six institutions.

For full lists of DLF and CLIR publications are available from http://www.diglib.org/pubs/dlfpubs.htm, and http://www.clir.org/pubs/pubs.html.

APPENDIX C: DLF-ANNOUNCE LISTSERV

The Digital Library Federation (http://www.diglib.org/) is a consortium of thirty-nine libraries and related agencies that are pioneering the use of information technologies to extend, share, and manage their collections and services. Through its members, DLF provides leadership for libraries broadly by:

- identifying standards and best practices for digital collections and networked access

- coordinating research and development in the use of information technology

- incubating projects and services that libraries need but cannot develop individually

The best way to keep up with DLF's initiatives, Forums, calls for collaboration, and news is to subscribe to the DLF-ANNOUNCE discussion list, available to all members and selected guests.

To subscribe:

1. Address an e-mail to the following: listserv@lists.diglib.org;
2. Leave the Subject line blank and remove your signature block from the body (if applicable);
3. In the body of the message type:
   subscribe dlf-announce [your first name] [your last name];
4. Send the message.

The DLF listserv should send a welcome message to you after the process is complete. In the event that you have difficulty, please contact the list owner Barrie Howard, bhoward@clir.org.

You may leave the list at any time by following steps 1 through 3, with the exception of substituting the word *signoff* for *subscribe*, stated in step 2.

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