

# SPECIAL ISSUE: ALLIANCE DIGITAL REPOSITORY

This is the first electronic-only DataLink. Contact Geri Virtue at [geri@coalliance.org](mailto:geri@coalliance.org) if you wish to add someone to the mailing list.

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## DataLink

*The Alliance Newsletter*

**Coming Soon:  
Alliance Digital Repository  
June 2007  
<http://adr.coalliance.org>**

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### ANNOUNCING THE JUNE 15, 2007 ALL ALLIANCE CONFERENCE

The June 15, 2007 All Alliance Conference will be a progress report and discussion opportunity regarding the Alliance Digital Repository (ADR) service. Intensive work has been underway since October of last year when the Alliance Board of Directors approved the ADR project and provided the necessary start-up funds. The Conference program will include a distinguished keynote speaker, an ADR overview, presentations from several Alliance institutions regarding their initial digital offerings and an in-depth examination of the beta version of ADR.

Kaye Howe, Ph.D., Executive Director for the National Science Digital Library's (NSDL) Core Integration project, will be the Conference keynote speaker. Dr. Howe is deeply involved in national digital initiatives and is very familiar with the Alliance's ADR initiative. The Alliance has formed a partnership with Digital Learning Sciences (DLS) - based at UCAR and supported by the NSDL - for the purpose of using digital resources held by Alliance institutions as primary content models for the development of the NSDL's Data Repository (NDR). Initially, these resource models will include images from collections at the Denver Public Library, the University of Wyoming, and the Colorado School of Mines.

This will be the third All Alliance Conference on the subject of digital repositories. The presentations and the panel discussions will provide attendees with a sense of how the ADR initiative has evolved within the Alliance over the years and how each institution can employ the ADR in support of its mission.

Attendance is by invitation only, extended by each Alliance library Dean or Director to those whose responsibilities or interests lie in issues of discovery, access, management and preservation of digitized content. The Deans and Directors have been requested to provide the Alliance Central office with the names of those who will be in attendance.

The Conference will be held at the Holiday Inn Select located in Denver on Colorado Boulevard and North Cherry Creek Boulevard. The Conference will begin at 9:00 am and conclude at 3:30 pm. Registration and a Continental Breakfast will be available starting at 8:30.

Alliance

ADR ALLIANCE DIGITAL  
REPOSITORY  
DISCOVER, MANAGE, PRESERVE

## ALLIANCE WELCOMES KEITH MAULL

Keith E. Maull joined the Alliance staff in December 2006 as the Alliance Digital Repository Programmer reporting to Jessica Branco Colati, the ADR Project Director. Keith is uniquely qualified to accept the ADR programming responsibilities having most recently been serving as a Digital Repository Research Consultant to the DLESE/NSDL Integration Team effort under the aegis of the University of Colorado's University Corporation for Atmospheric Research. DLESE, the Digital Library for Earth System Education, employs Fedora, the same open source software chosen by the Alliance Institutional Repository Implementation Team as the platform for the Alliance Digital Repository.

"We are thrilled to have Keith with us", stated Alan Charnes, Executive Director of the Alliance. "Talk about finding someone who can hit the ground running. Not only does his recent experience fit well with the ADR initiative, but his prior work in production-oriented environments gives us confidence that we will meet the project's aggressive timetable".



Keith graduated from Indiana University with a B.A. in Computer Science and currently is completing his Masters work in Computer Science at the University of Colorado at Boulder. Keith has presented papers at several conferences including most recently at the Open Repositories 2007 Conference in San Antonio (Khan, Huda J., Maull, Keith E. "Realizing the Role of Digital Repositories in Educational Applications: Supporting Content and Context").

Keith has served in various developer, consultant, contractor and software engineer roles in the private sector with several start-up companies as well as with established computer firms such as IBM and Hewlett-Packard.

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## PURSUING "THE GREAT PROMISE" OF FEDORA: PUTTING THE PIECES TOGETHER

*By Jessica Branco Colati, ADR Project Director*

For years, one of the key motivators behind adopting Fedora has been the reusability of applications and tools – "you develop over here, and I'll repurpose over there." All kinds of applications and tools would permeate the Fedora community, ideally neatly packaged and easily ported from one system to the next. Fedora, as we've heard frequently, would be the "plumbing" that connected our great masses of digital content, along with all kinds of mechanisms to supports querying, access, and manipulation. Librarians and archivists would be the stewards of the information highway's Fedora-based digital libraries and institutional repositories of content, guiding eager scholars and patrons toward hidden gems of digitally accessible content. This is The Great Promise of Fedora!

The obvious question that accompanies such a promise is "Can it really be done?" Could you really string together tools from multiple Fedora "shops," melding functions, and - more challengingly - mashing together programs written in different languages and requiring different servers. For a production-oriented project, this may be the most significant R&D challenge we will face, but we believe the answer to be "Yes! It can be done!"

Our sense is that you can "go shopping" and build your own Fedora from "off the rack" components. In doing so, we will be all the better for it. It's not easy - as Keith will attest - to work with so many different languages and platforms and make stable, manageable alterations, but with the Alliance's commitment to open-source, we've been able to sculpt the ADR in a way that offers the broadest possible selections of services to outfit our member-specific needs as soundly, quickly, and efficiently as we can.

fedora



When the Institutional Repository Investigation Team (IRIT) decided, after much time spent in product review and analysis, to pursue a Fedora-based solution for the Alliance's digital repository and more focused institutional repository needs, it was with the understanding that Fedora offered the opportunity to take the best of available open source tools and a thriving contribution-oriented open source community. It was the most robust in terms of

*(Continued on page 3)*

*(Fedora continued from page 2)*

supporting content and functionality, and it held the greatest promise of scalability and customization to meet Alliance member needs.

In the relative short time that the ADR project has been active, we've immersed ourselves in the Fedora/Fez/Valet/XTF communities, becoming, some would say, listerv hogs! This, too, is the Promise of Fedora - one of a community that is willing to share and willing to collaborate. Our fledging connections with the Digital Learning Sciences at UCAR, as well as contacts with members of the NSDL 2.0 Core integration group have been unexpected bonuses both in short-term assurance that we are not alone on the Front Range and in long-term development of ingest, management, access, and delivery services. We've had success in communicating with the primary developers of Fez, and have worked within the Alliance on XTF customization with Penrose Library staff at the University of Denver. As the ADR grows and matures, it is clear we will cement additional friendships in the Fedora community.

"Are we there yet?" you might ask. The answer is "No, not yet! But soon!" This is Alpha after all! But with Beta around the corner,

## INSIDE ADR BETA

The construction of the Alliance Digital Repository (ADR) is being phased into multiple releases. ADR Beta - offering a selection of services and functions to library staff - will be launched June 2007. A full production repository service (ADR 1.0) will be in place by the end of this year.

ADR Beta is building services on top of a Fedora architecture and will be presented as three distinct areas of service: ADRLib, a digital library portal structured following institutional repositories' communities and collections model; ADR eTexts, a full-text searchable electronic text environment; and ADR ETDs, a multi-step workflow that supports the submission, review, and cataloging of electronic theses and dissertations.

With a commitment to develop the ADR using existing open-source software and minimal custom programming, the Alliance has selected Fez, XTF, and Valet for ETDs as the underpinnings of ADR Beta.

Fez, an open-source digital repository software coming out of the University of Queensland's eScholarshipUQ project, is powering ADRLib. Fez comes with a generic user interface that supports community, collection, and content creation by authorized users, as well as metadata

and limited full-text search capabilities. Although it automatically generates thumbnails and preview versions of image files, there is no included image viewer at this time. Users are given the choice to view or download the files, based on their permissions. Future versions of Fez scheduled for release prior to ADR 1.0 will incorporate the ability to use skins to differentiate communities.

Other US adopters of Fez include Emory University and the Materials Digital Library (NSDL)

California Digital Library's XTF software is supporting ADR eTexts. XTF offers full-text and metadata searching of structured documents, including EAD and TEI XML. Currently, XTF does not directly connect with Fedora, however we are closely following work at non-Alliance universities working on building connections. Since our use of XTF is for discovery and access, we can engineer internal workflows that support the creation of access derivatives for use with XTF and stored in a file structure from master documents deposited in the repository.

VTLS' Valet for ETDs is being explored as the underlying software to support ETD submission and review. Valet offers a three stage deposit workflow, as well as the potential to generate editable MARC records from ETD creator- and approver-provided metadata.

Digital content deposited in the ADR for Beta release comes primarily from the digital collections of member libraries. We are also excited to have a handful of early adopters spread among Alliance institutions actively using our development systems and services. Their early participation and feedback compliments the input we receive from ADR Implementation Team members. In ADR Beta, we are focusing on the deposit, management, discoverability and delivery of generic digital objects, still images, and structured texts. The more than 100 sample submissions come to us in a variety of formats and numerous local and standardized metadata schemas, including MARC and Dublin Core. Additional metadata (ETDMS, MODS, ACML, etc.) are generated to support the various functions of ADRLib, ADR eTexts, and ADR ETDs.

The ADR team is investigating the use of the Handle System to provide persistent identifiers and location for digital objects deposited in ADR, as well as developing a suite of communication and support tools, including a code repository, and technical wiki. Work is also underway on a batch ingest utility that supports MARC and multiple content files, as well as MODS, EAD, TEI.

ADR Beta will be available to library staff in June at <http://adr.coalliance.org>

## ADR DOCUMENTS AND RESOURCES

In an effort to provide Alliance library staff and the interested public with as much information about the development of the ADR as possible, the ADR Alliance staff and committees make ADR documentation (i.e. status reports, minutes, project plans, matrices, presentations, and reference resources) available on the Alliance Web space, in an area dedicated to the ADR. A technically-oriented wiki and code repository will also be made available for review after the June release of Beta.

A link to the ADR project documentation Web space can be found on the Alliance front page's side bar (<http://www.coalliance.org>). The ADR space includes the mission and vision of the ADR, as well as the charges for and responsibilities of the ADR Implementation Team and Executive Committees. Other content available from the ADR space includes:

- Meeting Agendas and Minutes
- Documents and resources circulated at meetings
- Reports to Member Council and the Alliance Board
- Presentations about the ADR made by Alliance staff
- Additional resources related to the development of consortial digital repositories, including links to Fedora, Fez, other Fedora implementations, presentations by leaders in the repository fields, and articles relevant to the development of a digital repository.

This clearinghouse of information serves as both a reference source for Alliance members and others engaged in digital repository initiatives and a record of ADR development strategies and milestones.

## “THE WHAT?” A MINI-GLOSSARY OF ADR SPEAK

Sometimes, late in the ADR day, we find ourselves twisting our tongues around a series of acronyms that is reminiscent of alphabet soup...this issue of DataLink is no exception!

To help you follow along, we've include sampling of the glossary that will accompany ADR Beta's release:

### **DLESE Digital Library of Earth System Education**

A distributed community effort involving educators, students, and scientists working together to improve the quality, quantity, and efficiency of teaching and learning about the Earth system at all levels.

Supports Earth system education by providing access to high-quality collections of educational resources; access to Earth data sets and imagery, including the tools and interfaces that enable their effective use in educational settings; support services to help educators and learners effectively create, use, and share educational resources; and communication networks to facilitate interactions and collaborations across all dimensions of Earth system education. DLESE is a pathway of the NSDL, is funded in part by the National Science Foundation (NSF), and physically based at UCAR

### **DLS Digital Learning Sciences**

A non-profit center founded in 1999 as a joint effort between UCAR and the University of Colorado to develop interdisciplinary expertise in digital libraries, science education, computer science, educational technology, user-centered design and evaluation methods, cognitive psychology, e-science, and computational linguistics

### **Fedora Flexible Extensible Digital Object and Repository Architecture**

Open source software that gives organizations a flexible service-oriented architecture for managing and delivering their digital content.

### **Fez**

A web front-end management system for Fedora that is developed in PHP. This work is part of UQ eScholarship Project and the Australian Partnership for Sustainable Repositories. Fez functionality includes Web-based browsing and searching, semi-advanced searching, complex security, basic image handling, and Dublin Core

### **MODS Metadata Object Description Schema**

An XML schema intended to be able to carry selected data from existing MARC 21 records as well as to enable the creation of original resource description records. It includes a subset of MARC fields and uses language-based tags rather than numeric ones, in some cases regrouping elements from the MARC 21 bibliographic format.

### **NDR NSDL Data Repository**

Stores contextual information about NSDL resources, including relationships among resources and bibliographic metadata

### **NSDL National Science Digital Library**

The Nation's online library for education and research in Science, Technology, Engineering, Mathematics.

### **UCAR University Corporation for Atmospheric Research**

A non-profit consortium of over 100 university members and affiliates founded in 1960 to enhance the capabilities of the universities and to focus on scientific problems that are beyond the scale of a single university.

### **XTF eXtensible Text Framework**

A flexible indexing and query tool that supports searching across collections of heterogeneous data and presents results in a highly configurable manner. Supports ADR eTexts

## ADR LIBRARIANS

Development of the ADR is distributed over a number of committees and working groups comprised of Alliance library representatives.

**The ADR Implementation Team (I-Team)** is responsible for the many elements of the development of the organizational infrastructure of the Alliance Digital Repository. Team members serve as liaisons between the Implementation Team (including Alliance staff) and local institutions' staff, faculty, and community members. Contact information for I-Team members is available on the Alliance's Web site, under the Alliance Digital Repository section.

### I-Team Members:

**Dawn Bastian**

Coordinator for Digital Repositories Services  
William E. Morgan Library  
Colorado State University

**Steve Boss**

Head of Library Systems  
Coe Library  
University of Wyoming

**Emily Brown\***

Catalog Librarian, Western  
History/Genealogy,  
Denver Public Library

**Meg Brown-Sica**

Coordinator of Library  
Systems  
Auraria Library

**Greg Colati**

Digital Initiatives  
Coordinator  
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**Carol Dickerson**

Director  
Tutt Library  
Colorado College

**Laura Guy**

Computer Services  
Librarian  
Arthur Lakes Library  
Colorado School of Mines

**Suzanne T. Larsen**

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Associate Dean –  
Administration  
Michener Library  
University of Northern  
Colorado

**Myron Vallier\*\***

Catalog Librarian /  
Photographs,  
Denver Public Library

\* New Member, April 2007

\*\* Former Member, November 2006 – April 2007

### ADR Executive Committee (XC)

Comprised of representatives from participating institutions with significant technical and content/metadata/digital repository functionality knowledge. Members guide the actions of the larger implementation committee and make recommendations for prioritization of ongoing functional development of the ADR, in conjunction with Alliance staff.

### Members:

Dawn Bastian, Greg Colati, John Culshaw, Suzanne T. Larsen (alternate), Jo Sarling

#### ADR ETDs Working Group

Greg Colati  
John Culshaw  
Helen Reed  
Diana Sweany

#### ADR Policies Working Group

Christopher Brown  
Steven Boss  
George Machovec

#### ADR Metadata Working Group

This group is a sub-group of the CDP's Metadata Working Group, and we are grateful that CDP and BCR have offered their services to our repository initiative!

## THE ALLIANCE AND DIGITAL LEARNING SCIENCES: A PARTNERSHIP OF PROMISE

DLS, a joint initiative between UCAR and CU, Boulder, focuses on developing interdisciplinary expertise in digital libraries, science education, computer science, educational technology, user-centered design and evaluation methods, cognitive psychology, e-science, computational linguistics.

In conjunction with its work porting the DLESE pathway of the NSDL to a Fedora platform, DLS is adopting the NSDL Data Repository (NDR) for facilitating collection management and content access and delivery. To best model the NDR to support all kinds of content, DLS is looking for primary content (i.e. images, texts, audio, video) to work with – lots and lots of primary content!

To help DLS develop NDR content models for primary content and associated metadata, the Alliance is partnering with DLS to provide both sample content - initially in the form of images from the collections of the Denver Public Library, the University of Wyoming, and the Colorado School of Mines – as well as staff support.

While DLS' overall goal is to extend the NDR to support a broad spectrum of primary content, the partnership with the Alliance will focus on supporting the creation, management, and delivery of image collections as a first step. DLS is looking to the NSDL to provide supplemental grant funding to support the Alliance and DLS efforts. The final products of this partnership, including content ingest, management, and viewing tools, will be incorporated into the Alliance's repository service for use in ADR 2.0 (scheduled release: June 2008).



### *Alliance/DataLink Listserv*

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- subject line of email: put topic of your message
- in the text of the message: the content of your message

For additional information or assistance, contact: George Machovec. Phone 303/759-3399 Ext.101; Fax: 303/759-3363; email: [george@coalliance.org](mailto:george@coalliance.org)

## Alliance

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