SHARING A PROJECT MANAGEMENT EXPERIENCE: SOAR / DSPACE UPGRADE AND ENHANCEMENT

Susan J. Matveyeva
Institutional Repository Librarian
Wichita State University
Outlines:

- Where we were before this project
- What we wanted to accomplish
- What has been done to the date
- Where we are now
- What I learned as a project manager
STARTING POINT

Where we were before we started this project
SOAR: Shocker Open Access Repository

- Established in 2007
- Powered by DSpace
- Structure mirrors University colleges & departments
- Over 2000 titles: ETD, e-journal, monographs, proceedings, museum collections, data sets, films
- Managed by Catalog & Institutional Repository Librarian with help of GA (16 hours), Metadata Cataloger and IT Consultant from Library Systems
- Located in Library Technical Services
- No Open Access or mandated deposit policy on campus
- Mandated ETD program established
WHAT WE WANTED

We were pretty ambitious from the beginning
We planned:

- Upgrade DSpace 1.4.2 to its current release 1.6.2
- Add functionality for media formats to better manage digital images and videos
- Add authentication to provide WSU community with access to closed collections
- Implement statistics as marketing tool to promote SOAR to WSU authors & for reporting purposes
- Simplify submission process to promote self-submissions

- We did not plan any enhancements to improve metadata management at this time
DONE TO DATE

SOAR Project Progress
We follow the plan, but added more than planned

- **Project Overview**:
  - Server migration to new server environment
  - DSpace Upgrade to 1.6.2
  - Three new proprietary modules added to DSpace
  - Learning and building DSpace XMLUI Manakin
  - Implementing embargo, statistics on UI
  - Authentication of the closed collections
  - The final touches: restoration of some lost customizations
Server migration to new server environment

- Administration decided to move all library servers to the University Computing and Telecommunication Services (UCATS)
- Library SOAR production server moved to UCATS
- SOAR production server is not a good fit to UCATS environment!! Migration ahead!
- Unix Admin successfully restored a dump of the production DSpace 1.4.2 on the test server
Server migration to new server environment

- “test everything you can think about…every operation or function”
- Every new migration required extensive testing
  - Content
  - Hierarchy
  - Admin login and basic tasks (e.g. add/edit /delete e-person, community, collection, policy, news)
  - Submitter login and workflow
  - Submission of metadata
  - Upload files
  - Different file formats and different browsers
  - New user registration
  - Mail server [and more]
  - All problems were fixed! (Thanks to Unix Admin!)
Server migration to new server environment

- DSpace 1.4.2 moved from test server to the new production server
- Testing the new production server, fixing errors
- Hurray!! The migration to the new production server has been completed
  - Final touches: syncing “assetstore”; modifying IP and converting to a CNAME; some changes to the DSpace config.. Restoring handle service… Testing again!! “test EVERYTHING you can imagine”!!
- Good bye “old” DSpace library server 😞
- SOAR/DSpace is now part of UCAT server environment!!
DSpace Upgrade to 1.6.2

- Unix Admin upgraded DSpace: at first to 1.5 and after that to 1.6.2 XMLUI Manakin
- *Finally success!! We were waiting for this upgrade for so long!!* NOW WE HAVE CURRENT RELEASE OF DSPACE UP AND RUNNING ON A NEW TEST-SERVER!!
- *But… we found ourselves at the new beginning!!*
- All customizations were gone!! Front end was gone!! New features did not come ready!! New configuration options… New stuff…to learn… A lot of work ahead…
**New front end:** XML UI Manakin

- XML UI (Manakin) is “default” interface starting from 1.5
- It is a flexible programmable dynamic interface
- Module design – easier to extend
- Support multiple interfaces / views for community, collection, or item
- Require a deep knowledge of XML and CSS to implement
- Customizable if have web developer on staff
- Metadata Cataloger with help of DSpace Admin (Library Systems) learned Manakin styles, themes, and aspects & built a new SOAR UI *

*See Sai Deng, “Building New Interfaces for Shocker Open Access Repository”, CULS Fall Conference, Emporia, Oct.15, 2010*
SOAR: Shocker Open Access Repository

SOAR is the institutional repository of Wichita State University. The purpose of SOAR is to make the University’s digital scholarship available to global audience and to serve as a reliable digital storage. SOAR has a dual function of a publication platform and a digital archive.

Faculty or their representatives may submit materials either themselves or with a SOAR staff help. Access to some collections or items may be restricted according to the nature of materials or author request. Authors retain copyright to their own works published/archived in SOAR (see University intellectual Property policy.)

Users have options to browse collections by keyword, title, author, date, or subject, or to search full text. Those who want to receive email notification on new additions may use a RSS feed or SOAR internal email system.

University faculty and staff, we invite you to publish/archive your works, data, or documents in SOAR. Just fill out a simple submission form and we do the rest. Or contact Subject Librarian, or Dr. Susan Matveeva.

Communities in SOAR

Select a community to browse its collections.

- Academic Affairs and Research [29]
- Business [9]
- Education [134]
- Engineering [568]
- Faculty and Researchers [26]
- Fine Arts [23]
- Graduate School [989]
- Health Professions [217]
New feature: Embargo

- A new feature introduced in DSpace 1.6x
- Help to manage temporary restrictions on public access to ETD (sequestered theses) as well as the restrictions imposed by publishers
- Sequestered theses and articles published in journals can be submitted to SOAR immediately as they become available
- Submitters assign the date when restrictions can be lifted
- SOAR will make works accessible on the Web at the assigned date
- Embargo is part of submission process
- Implemented by DSpace administrator
Item submission

Embargo Date:
2011-09-01
If required, enter date 'yyyy-mm-dd' when embargo expires or 'forever'.

Authors:
Smith John
First name(s) + "Jr.", e.g. Donald Jr.

Title:
The best article ever

Date of Issue:
2010 September 01
Year Month Day

Publisher:
Wichita State University

Search SOAR
Search SOAR
Advanced Search

Browse
Communities & Collections
By Issue Date
Authors
Titles
Subjects
This Collection
By Issue Date
Authors
Titles
Subjects

My Account
My Exports
Logout
Profile
New feature: **Statistics**

- New highly desirable feature – comes with a current release
- Allows to track statistics on item as well as collection level
- Let authors know how many people visited and downloaded their works
- Installed at Admin Interface by default
- Customization: Customized by SOAR DSpace admin for public interface
### Statistics

**Total Visits**

<table>
<thead>
<tr>
<th>Views</th>
<th>Miniature jar 16</th>
</tr>
</thead>
</table>

**Total Visits Per Month**

<table>
<thead>
<tr>
<th>Time</th>
<th>Minature jar</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2010</td>
<td>0</td>
</tr>
<tr>
<td>May 2010</td>
<td>0</td>
</tr>
<tr>
<td>June 2010</td>
<td>0</td>
</tr>
<tr>
<td>July 2010</td>
<td>0</td>
</tr>
<tr>
<td>August 2010</td>
<td>3</td>
</tr>
<tr>
<td>September 2010</td>
<td>10</td>
</tr>
<tr>
<td>October 2010</td>
<td>3</td>
</tr>
</tbody>
</table>

**File Visits**

<table>
<thead>
<tr>
<th>File</th>
<th>Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002.4.93.jpg</td>
<td>40</td>
</tr>
<tr>
<td>2002.4.93.jpg</td>
<td>15</td>
</tr>
<tr>
<td>2002.4.93.jpg</td>
<td>15</td>
</tr>
<tr>
<td>2002.4.93.jpg</td>
<td>4</td>
</tr>
<tr>
<td>2002.4.93-1-0-0.jpg</td>
<td>2</td>
</tr>
<tr>
<td>2002.4.93-1-0-1.jpg</td>
<td>2</td>
</tr>
<tr>
<td>2002.4.93-1-1-0.jpg</td>
<td>2</td>
</tr>
<tr>
<td>2002.4.93-1-1-1.jpg</td>
<td>2</td>
</tr>
<tr>
<td>2002.4.93-0-0-0.jpg</td>
<td>2</td>
</tr>
</tbody>
</table>

**Top country views**

| Views       | United States of America 16 |

**Top cities views**

<table>
<thead>
<tr>
<th>Views</th>
<th></th>
</tr>
</thead>
</table>
New Feature: Authentication

- We discussed several methods of authentication, such as LDAP, by IP address, Shibboleth
- The method chosen for SOAR called CAS “Common Authentication Service”
- CAS allows the SOAR server to participate in WSU Single-Sign-On (SSO)
- Metadata will stay open for public
- Selected files will be protected
- When end user click on a restricted file, login page appears
- People with the University’s ID will be able to access restricted files either on campus or remotely
New Feature: **Zoom ( @mire)**

- Zooming module – work well for large images
- Previously, we used the external zoom using Zoomify free version
- With @mire Zooming module, SOAR users will be able to use zoom in browser viewer
- In viewer, the image can be maximized, minimized, or used in full screen
New Feature: Audio-visual Streaming Viewer (@mire)

- The audio-visual streaming module will enable in browser playback of audio and video files. No more needs to install different players!! Users will be able to view videos directly in SOAR
- Required purchase of Adobe Flash Media Streaming Server
- Support many video formats, such as aiff, asf, avi format, dv video, mpeg-2, flv, mov, mp3, mp4, ogg, rm (realmedia), swf, wav, wmv,
New Feature: Document Streaming Viewer (@mire)

- The document streaming module will please copyright cautious author with the option to restrict end users access to “View only” (cannot print or copy)
- SOAR staff will have the option to choose use View/Open or Preview (@mire viewer) for specific collections or items or to use both options
- The system will run script daily looking for new submissions
- The viewer can be used for variety of documents
- No MS Word, Adobe Acrobat or other software will be required to view the documents
New Admin Interface

- Completely new admin interface
- A lot of new functions and controls: harvester, export, import metadata, statistics and more

To explore in the future:
- Batch metadata editing
- Authority and controlled vocabulary mechanism
- Multiple native metadata schemas (we use the additional local fields, e.g. from Darwin Core: Virtual Herbarium; needs more exploration)
- Improvement of full text search with Solr, the open source enterprise search platform
WHERE WE ARE NOW

What was done to the date; current status of the project
The project is close to completion

- What left?
- Migration from a test server to the new production server
- The new modules, new front end, and enhancements will migrate from test to the production server
- As SOAR production did not stop during the project and SOAR collections grow during the months we were building the new SOAR, content of the current production (not test) server will be used in the updated SOAR 1.6.2

- We plan to finalize the project by the end of October - beginning of November 2010
Some considerations:

SOAR has many external links:
• end users linked to: http://soar.wichita.edu/dspace
But new SOAR URL is: http://soar.wichita.edu/xmlui
Harvesters may stop harvest SOAR as its OAI-PMH has been changed.
Decision: users will be redirected from old to new URL automatically
Do not forget to inform the handle system about SOAR upgrade (if connection lost)
WHAT I LEARNED

Reflections on my project management experience
This is an exciting opportunity

- Planning and executing the complex project
- Stay focused and be persistence in reaching the project goals
- Flexibility and patience
- Team building
- Working with IT people
- Working with the DSpace leading service provider
- Managing SOAR production and major upgrade and enhancement of DSpace at the same time
- Solving problems
SOAR Project Team

• My deep appreciation goes to SOAR Project Team who work enthusiastically and tirelessly toward the success of this project

Sai Deng, Metadata Cataloger
Baseer Khan, Library Systems
Andy Speagle, UCATS
Muhammad Usmani, Library Systems
Any questions?

Thank you!!