Topics

✓ Introduction: About DSpace and the Texas Digital Library
✓ DSpace Basics
✓ Ingesting Content
✓ Workflows and Roles
✓ Metadata
✓ Other things that are good to know
Introduction

DSpace and the TDL
The Texas Digital Library is a *consortium of libraries* that works together to support *greater access* to the riches of Texas academic institutions.
DSpace

Open source software for digital repositories

Started in 2002 from developers at MIT and HP Labs

Active development community

Over 1000 organizations use DSpace
  - Primarily research/higher education

The TDL is a Platinum Member of DuraSpace, the sponsoring organization of DSpace.
DSpace Basics

COMMUNITIES AND COLLECTIONS, LOGGING IN, NAVIGATING THE ADMIN INTERFACE
Features

- Full-text searchable (any text-based file)
- Discovery: search/browse in the DSpace interface, handles (Faceted browse)
- Can handle any type of file (file=bitstream); best known for text-based files
- Optimized for indexing in Google and Google Scholar
- Persistent URLs (Handle system)
Examples of DSpace

- http://repositories.lib.utexas.edu
- http://repository.tamu.edu/
- http://repositories.tdl.org/ttu
- http://repositories.tdl.org/utmb
- https://repositories.tdl.org/uh-ir/
- http://repositories.tdl.org/tamug/
Repository Structure:
Communities and Collections

**Community** – highest level of DSpace hierarchy; can contain sub-communities and/or collections

**Sub-Community** (optional) – if used, contain collections or additional nested sub-communities

**Collection** – Contain items

**Item** – Contain bitstreams (i.e. files), metadata, and license
Repository structure: Example #1

Community

Collection

Item

Metadata

Bitstreams

License
Repository structure: Example #2
Example from UT Digital Repository
Community Structure in TAMUG Repository

Community

Sub-Community

Collections

Above: Communities and Collections in the Texas A&M at Galveston Repository
Logging into DSpace

The TDL uses “Shibboleth” to manage authentication with our services.

Shibboleth lets you log in using your university credentials.

• Training DSpace installation: https://dspace41-demo.tdl.org/demo-ir/
• There’s no Shibboleth on the training box. Log in using provided student login credentials: tdl.studentX@gmail.com where X is the number on the yellow sticky note (password: tdlstudent)
Context Clues

Available actions change as you navigate through the interface.

On the DSpace homepage

- **Context**
  - Create Community

- **Administrative**
  - Access Control
    - People
    - Groups
    - Authorizations
  - Registries
    - Metadata
    - Format
  - Items
  - Withdrawn Items
  - Private Items
  - Control Panel
  - Statistics
  - Import Metadata
  - Curation Tasks

On a Collection page

- **Context**
  - Edit Collection
  - Item Mapper
  - Export Collection
  - Export Metadata

- **Administrative**
  - Access Control
    - People
    - Groups
    - Authorizations
  - Registries
    - Metadata
    - Format
  - Items
  - Withdrawn Items
  - Private Items
  - Control Panel
  - Statistics
  - Import Metadata
  - Curation Tasks

On an item page

- **Context**
  - Create version of this item
  - Edit this item
  - Export Item
  - Export Metadata

- **Administrative**
  - Access Control
    - People
    - Groups
    - Authorizations
  - Registries
    - Metadata
    - Format
  - Items
  - Withdrawn Items
  - Private Items
  - Control Panel
  - Statistics
  - Import Metadata
  - Curation Tasks
How To:

Create a Sub-community.

Assign an Administrator to your Sub-community.

1. Go to https://dspace41-demo.tdl.org/demo-ir/ (Make sure you are logged in to DSpace.)
2. Navigate to the “UHCL Training Community”
3. Click on Create Sub-community
4. Give your Sub-community a name, provide introductory text, and click on Create.
5. Click on the Assign Roles tab
6. Click on Create to assign Administrators
7. Add kristipark@yahoo.com as an Administrator.

Note: Addition of the administrative user automatically creates a “Group” called “COMMUNITY_X_ADMIN.”
1. Navigate to the Sub-Community you just created.
2. Click on Create Collection.
3. Give your collection a name, provide some introductory text, and click on Create.
4. On “Assign Roles” tab, click Create next to Administrators.
5. Add [username} as an Administrator for the Collection.

Note: Initially, when you add a user as Administrator, the user will appear as “Pending” until you click SAVE.
How To:

Edit an existing Collection.

1. Return to DSpace Home
2. Navigate to the Collection you just created.
4. Edit any metadata for the collection and upload an image under “Upload new logo.”
5. Click Save updates.
Case Study: SEAS Community

Sargassum Early Awareness System Community in the Texas A&M at Galveston Repository

- **Sargassum Early Advisory System (SEAS)**
  - Azores historic weather
  - Effects of Sargassum on West End Beaches Galveston 2006
- **Galveston Historic Beach Profiles**
  - Beach Profile Monitoring 2002
  - Beach Profile Monitoring 2006
  - Old Profiles 1966-1980
  - Profile 2007-2008
Ingesting Content

SUBMISSION WORKFLOW
Ingest Process

External SIP

Batch Item Importer

Web Submit UI

In Progress Submission

Workflow (optional)

Item Installer

 Archived Item

Texas Digital Library
Starting a new submission

Users with “submit” privileges will see a “Submissions” link under My Account.

Click “Start a New Submission” to begin.
Submission Steps

Select a Collection
• Only collections on which you have “submit” privileges will appear.

Describe the item (3 screens)
• Title and Date of Publication are required.

Determine access
• Make item private? – Item will not be searchable.
• Set up limited embargo? – Provide future date for access

Upload file(s)
• Upload one or multiple files
• Edit metadata specific to each bitstream, including embargo info.

Complete submission
• Click “Complete submission.”

Agree to license
• Agree to license

Review
• Review information and make corrections.

If Collection has no workflow steps, and you did not replace any restrictions on access, the item will be immediately available in DSpace.
1. Click “Submissions”
2. Click “start another submission.”
3. Select a collection and click Next.
4. Proceed through the workflow. Upload one or multiple files from desktop folder.

Practice
Submit an Item to your Collection.
Editing Items

Moving items to a different collection

Making an item private

Replacing or modifying bitstreams
  - Reordering bitstreams

Editing item metadata
Reorder bitstreams

In items with multiple files (i.e. bitstreams), an administrator can reorder the files after submission.

1. Complete submission of item.
2. Navigate to collection and item just submitted.
3. “Edit this item.” => Item Bitstreams tab
4. Use arrows on right side to reorder the files
Editing Item Metadata

1. Navigate to the Item
2. Click “Edit this item” under “Context.”
3. Go to “Item Metadata” tab.
4. Edit existing metadata, or add new fields.
Roles and Workflows

E-PEOPLE, GROUPS, AUTHORIZATION
Roles within DSpace

Repository Administrator
Community Administrator
Collection Administrator
Reviewer OR Submitter
Reader

More privileges
Fewer privileges

Texas Digital Library
E-People and Groups

E-People and Groups are the way DSpace identifies users for the purpose of granting privileges.

E-Person = User Account
- An E-Person can be granted certain privileges within DSpace.
- In TDL-hosted systems, an E-Person is created when a user logs in for the first time.

Groups = a list of E-People
- Groups can be granted permissions.
- Anyone listed in the group gets the permissions granted to the group.
- Two default groups in DSpace: Administrator and Anonymous
Roles and Groups

More privileges

Repository Administrator

Community Administrator

Collection Administrator

Reviewer OR Submitter

Reader

Fewer privileges

Administrator

COMMUNITY_X_ADMIN

COLLECTION_X_ADMIN

COLLECTION_X_SUBMIT

COLLECTION_X_WORKFLOW_STEP_1

COLLECTION_X_WORKFLOW_STEP_2

COLLECTION_X_WORKFLOW_STEP_3

Anonymous (by default)
Managing Groups
Method #1

Edit Collection => Assign Roles
- Create a group of Collection Administrators
- Create a group of Submitters
- Create a specified Group who can access materials (default is “anonymous”)
- Create Workflow Steps (more on this later)

To create a Group: Click “Create” (or “Restrict”), search for and add E-People to the group, click SAVE.
Managing Groups (Method #2)

Access Control => Groups

To create a Group: Click “Click here to add a new Group,” give new Group a name, search for and add E-People to the group, click SAVE.

Note: No privileges are attached to any groups created through this method. But groups created here are available to be authorized in other parts of the interface.
Workflows

Without a Workflow in place, items submitted to a Collection in DSpace will automatically be archived and published.

Workflows allow for one, or multiple, steps for reviewing submissions and editing metadata prior to publication.

- A Workflow can have 1, 2, or 3 steps.
- Each step will have an E-Person Group attached.
Available Workflow Steps

Step 1
• Can accept or reject submission

Step 2
• Edit metadata; accept or reject submission

Step 3
• Edit metadata and publish; cannot reject

Notes: A collection might have one or all of these steps. It could have any one of these steps but not the other two.
A Workflow with all three steps
Creating a Collection Workflow

**Edit Collection => Assign Roles**
- Create a Group for the Workflow step(s) you want.
- A Step without a Group does not exist.
Working within a Workflow

Submitter submits item to a Collection with “Step 2” in place. Submitter gets this message:

- An email is sent to every E-Person in the Workflow/Reviewer Group.

Reviewer Group also sees this on their Submissions page:
Workflow, cont.

Review takes the task and reviews submitted item.

Reviewer can edit the item’s metadata, approve or reject the item, or return the item to the pool for another Reviewer to pick up.
Authorization Policies

VERY specific permissions can be created for e-persons and groups by creating authorization policies at the Collection, Item, or Bitstream Level.
# Collection-Level Authorization Policies

<table>
<thead>
<tr>
<th>COLLECTION LEVEL</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD/REMOVE</td>
<td>Add or remove items (ADD = permission to submit items)</td>
</tr>
<tr>
<td>DEFAULT_ITEM_READ</td>
<td>Inherited as READ by all submitted items</td>
</tr>
<tr>
<td>DEFAULT_BITSTREAM_READ</td>
<td>Inherited as READ by Bitstreams of all submitted items. Note: only affects Bitstreams of an item at the time it is initially submitted. If a Bitstream is added later, it does not get the same default read policy.</td>
</tr>
<tr>
<td>COLLECTION/admin</td>
<td>Collection admins can edit items in a collection, withdraw items, map other items into this collection.</td>
</tr>
</tbody>
</table>
### Other Authorization Policies

<table>
<thead>
<tr>
<th>Item-Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD/REMOVE</td>
<td>add or remove bundles</td>
</tr>
<tr>
<td>READ</td>
<td>can view item (item metadata is always viewable)</td>
</tr>
<tr>
<td>WRITE</td>
<td>Can modify item</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bundle-Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD/REMOVE</td>
<td>add or remove bitstreams to a bundle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bitstream-Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ</td>
<td>view bitstream</td>
</tr>
<tr>
<td>WRITE</td>
<td>modify bitstream</td>
</tr>
</tbody>
</table>
Metadata
Refresher: Editing Item Metadata

1. Navigate to the Item
2. Click “Edit this item” under “Context.”
3. Go to “Item Metadata” tab.
4. Edit existing metadata, or add new fields.
DSpace and Dublin Core

Dublin Core is at the heart of DSpace

2 mandatory elements when submitting thru UI:
   ◦ Title (dc.title) and
   ◦ Date of Publication (dc.date.issued)

7 automatic elements created by the software without any need for contributor input.
   ◦ 3 date elements
   ◦ 2 format elements
   ◦ Identifier
   ◦ Provenance.
Creating Metadata Templates

When you should use metadata templates:
- Use metadata templates when you have one or more metadata elements whose value is the same across the whole collection.

What you should know about metadata templates:
- The value you enter in the template will automatically be applied to each work submitted to that collection.
- If you create a metadata template for a collection that already has items in it, the template value will only be applied to future submissions.

Go to: Collection => Edit Collection => Edit Metadata => Item Template
How To:
Create a Metadata Template

1. Navigate to the desired Collection.
2. Click Edit Collection
3. On the “Edit Metadata” tab, scroll down to the bottom of the page and click the Create button next to Item template
4. Click the Work Metadata tab
5. Select the metadata element in the pulldown menu
6. Enter the value for this metadata element in the provided field.
7. Click the Add new metadata button.
Adding Items to Metadata Registry

- The metadata registry maintains a list of all metadata fields available in the repository.
- These fields may be divided amongst multiple schemas. However, DSpace requires the qualified Dublin Core schema.
- You may extend the Dublin Core schema with additional fields or add new schemas to the registry.
New metadata schema

Add the web address of the new schema

Add a prefix to be used for each term.
Add fields to an existing schema

Click on the namespace link.

Add new field.
Good to Know
Statistics

Usage statistics can be retrieved from individual item, collection and community pages. These Usage Statistics pages show:

- Total page visits (all time)
- Total Visits per Month
- File Downloads (all time)*
- Top Country Views (all time)
- Top City Views (all time)
Withdraw an item = item is hidden from view, leaves a “tombstone,” can be reinstated

Expunge an item = item is completely erased from the archive, cannot be retrieved.
Mapping items

• One item may be displayed in multiple Collections simultaneously.
  ◦ “Owned” by the original Collection to which it was submitted. “Mapped” to additional Collections. (Think of a desktop “shortcut” to an application or file on your computer.)
  ◦ The “mapped” item inherits all the permissions, licenses, etc. of the original item.
How To:
Use the Item Mapper

1. Navigate to the Collection where you want the work to appear (i.e. the “mapped” collection).

2. Click **Item Mapper** under CONTEXT in the right-hand navigation bar.

3. In the search box, enter the title of the item you want to map into the new collection.

4. Click **Search works**.

5. Click the check box next to the work you want to map.

6. Click the **Map selected items** button at the top of the page.
Batch Metadata Editing

Might be useful for:
- Batch editing of metadata (e.g. perform an external spell check)
- Batch additions of metadata (e.g. add an abstract to a set of items, add controlled vocabulary such as LCSH)
- Batch find and replace of metadata values (e.g. correct misspelled surname across several records)
- Mass move items between collections
- Mass deletion, withdrawal, or re-instatement of items
- Enable the batch addition of new items (without bitstreams) via a CSV file
- Re-order the values in a list (e.g. authors)

3 Steps:
1. Export CSV file
2. Edit values in CSV file
3. Re-import CSV file

Good documentation:
https://wiki.duraspace.org/display/DSDOC4x/Batch+Metadata+Editing
Exporting Collections

1) Export Collection (or Community)

Export Collection or Community via UI

2) Receive email, click on link to access exported files.

3) Download zip file containing all items.
Harvesting

• DSpace exposes metadata for collection by harvesters using the OAI-PMH protocol.
• DSpace can also harvest metadata and/or objects from other OAI-compliant repositories.
• Harvesting of another collection is configured under “Content Source.”

Documentation: https://wiki.duraspace.org/display/DSDOC4x/OAI
Curation Tasks

DSpace provides a framework, which it calls a “Curation System” for building programs that do routine repository management tasks.

Several out-of-the-box “curation tasks.”

- Profile bitstream formats
- Check for required metadata

Where to find Curation Tasks:

Edit Collection (or Edit Community) => Curate
Resources

TDL Helpdesk: support@tdl.og
  ◦ http://www.Tdl.org/support/
  ◦ 1-855-495-4317

DSpace Documentation:
https://wiki.duraspace.org/display/DSDOC4x/DSpace+4.x+Documentation

TDL DSpace Users Group:
https://utlists.utexas.edu/sympa/info/tdl_dspace_users_group
(Click “subscribe”)
Contact info

Kristi Park
512.495.4417
kristi.park@austin.utexas.edu

Laura McElfresh
409.741.7179
mcelfrel@tamug.edu