Building Trust Together: A Consortium Approach to Open Repositories via DSpace and the Texas Digital Library

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Panelists

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Overview

- About the TDL consortium
- Repository hosting service model overview
- Tech stuff: architecture, code management, etcetera
- TDL DSpace Users Group
- Member Case Studies: UT Austin, Texas A&M Corpus Christi, UT San Antonio
- Conclusions and Q&A
About TDL

Equitable access to and preservation of digital content

- Repository hosting
- ETD workflow/publication (Vireo)
- Texas Data Repository (Dataverse)
- Journal hosting (OJS)
- Digital Preservation Services
- DPLA Aggregations
TDL Members

Angelo State University
Arizona State University
Baylor University
Houston Public Library
Sam Houston State University
Southern Methodist University
Stephen F. Austin State University
Tarrant County College
Texas A&M - Galveston
Texas A&M International University
Texas A&M University
Texas A&M University - Corpus Christi
Texas State University
Texas Tech University

Texas Woman's University
Trinity University
University of Dallas
University of Houston
University of Houston - Clear Lake
University of North Texas
University of Texas - Rio Grande Valley
University of Texas at Arlington
University of Texas at Austin
University of Texas at Dallas
University of Texas at San Antonio
UNT Health Science Center
UT Medical Branch
UT Southwestern
West Texas A&M University
20 hosted DSpace repositories
~340,000 items
Publications + data + cultural heritage + institutional archives + harvested metadata
A collaborative model

**TDL staff responsibilities:**
- Systems and application maintenance
- Software development
- User support (TDL Helpdesk)
- Training for new users
- Support for DSpace Program at LYRASIS (Platinum membership)
- Community coordination: The TDL DSpace User Group

**Member responsibilities:**
- Content management
- Repository administration (UI)
- Local policy development
- Engagement with/leadership of the TDL community of users
Fee structure

- Supported by membership fees + service fees
- Tiered membership categories based on type of institution
- Cost recovery
- Full membership > Consortium governance

Scan for more about TDL membership fees
Tech stuff: Repository hosting

- Amazon Web Services
  - 22 VMs that all include:
    - DSpace 6.3
    - Amazon Linux 2
    - Apache 2.4
    - Tomcat 9
    - PostgreSQL 13
    - Shibboleth 3.3
    - Fuseki 4.5
Tech stuff: Centralized services

- Ansible for server deployment in AWS
- Ansible for DSpace application and services
- Centralized SMTP email services via Amazon’s Simple Email Service
- Comprehensive server monitoring
  - Munin
  - Prometheus
  - Slack integration for server alerts
Tech stuff: Code management

- Public DSpace code repository on GitHub
  - Current with official DSpace repository
  - Used to test and contribute PRs to the official repository
- Hosted GitLab instance
  - DSpace code repository
    - Used to merge updates to DSpace code with TDL customizations
  - Post-build DSpace code repository
    - One default DSpace 6.x branch with Mirage 2 theme
    - Separate branches for each institutional repository
- Final DSpace code is deployed to the VM with only the branch corresponding to that institution
Tech stuff: Customizations

**Code**
- HTML5 audio/video media player
- Replication Task Suite (RTS) to push data to DuraCloud
- Optional login screen adjustments

**Configuration & templates**
- Faceted search and browsing customizations
- Integrations, e.g. DataCite, Sherpa Romeo, Altmetrics
- Look-and-feel GUI changes
Tech stuff: Ancillary tooling

- Python code to generate DSpace statistical reports
  - Excel spreadsheets with views/downloads stats for communities, collections, items and the entire repository
- Audio/video content management using Python scripts
  - Facilitate using media player or traditional thumbnails using primary bitstream setting in an item
Item Templates

Item templates are useful when you have one or more metadata elements whose values automatically and consistently be applied to any item submitted to that collection. To create a template, first select the Collection you will be adding the item to. Then

- ACCOUNT
- Logout
- Profile
- Submissions
- CONTEXT
- Edit Collection
- Item Mapper
- Export Collection
- Export Metadata
How it all started

Invite sent out to the TDL listserv
August 2018 - Ed Warga was the first Chair
Collected group input on outcomes and activities
Examples of discussion topics

Statistics
Metadata editing
Accessibility
API reports
Updates about DSpace
Outreach efforts
OER
Sharing takeaways from conferences

Part of the User Group at DSpace NA Meeting 2019
Sharing resources

Statistics
Workflow documentation
Outreach documentation (policies, emails)
Peer to peer training
Skills survey
UT Austin Case Study
About us

R1 institution with over 50,000 students
No campus OA policy

Texas ScholarWorks - 99000+

Areas of repository success

Staffing

Other TDL services used: Vireo, OJS, Dataverse, OER
Introduction

Texas ScholarWorks was established to provide open, online access to the products of the University’s research and scholarship, to preserve these works for future generations, to promote new models of scholarly communication, and to help deepen community understanding of the value of higher education.

UT Tower and campus image credit: Earl McGeehee, CC-BY, https://www.flickr.com/photos/eimg/7452145850
Benefits to consortium approach

Less downtime for TSW
Questions are answered quickly
Troubleshooting of weird problems
Improved statistics
Learning from my colleagues across TX
Being more informed about the larger DSpace community and software upgrades
A&M Corpus Christi Case Study
About us

- R2 Carnegie Classification with 10,000 students; HSI
- No campus OA policy
- TAMU-CC Repository: Just under 30,000 items
- Areas of Success: ETDs, Research Centers, Special Collections & Archives
- Staffing & Repository Management
- Other TDL services: OJS

tdl.org
Benefits to consortium approach

We no longer have local expertise to host DSpace ourselves

Learning from colleagues:

- Don’t have to reinvent the wheel on policies, procedures, training, libguides
- Resources and training: OpenRefine, HelpDesk
UT San Antonio Case Study
About us

- Separate UT System school from UT Austin
- Roughly 35,000 students, founded 1969
- **Hispanic Serving Institution**
- Carnegie R1 institution as of Dec. 2021
- No campus OA policy
About the Runner Research Press

- Joined TDL in 2019, launched in DSpace in 2021
- 721 items
- Repository Governance Team
  - Scholarly Communications
  - Systems
  - Metadata
  - Subject Librarians
- Areas of success
  - UTSA-hosted journals
  - Archiving student experiences during COVID-19
- No OJS or Vireo (yet)
Disinfect

Abstract
In a pandemic, our physical belongings aren't the only thing we should frequently wipe clean from viruses. With every notification and news headline, my headspace became contaminated with thoughts of anxiety, doubt, and fear of the future. I was inspired by a poem of a fellow UTSA student.

Description
This item was created by a UTSA undergraduate student during the Fall 2020 semester as a part of a collaborative, interdisciplinary project designed to gather, create and preserve the UTSA stories of the present for future study.

Department
Art and Art History

URI
https://hdl.handle.net/20.500.12588/306

Collections
Defining Moments 2020
Benefits to consortium approach

- Incredibly helpful when starting from scratch!
- Initial training for Libraries staff on DSpace
- Technical assistance and expertise / Help Desk
- Statewide knowledge base
- Faculty were impressed by association with other R1 schools
What are the challenges to using this hosted model?
Conclusions and Q&A