Implementing Open Source Systems for Digital Asset Management and Preservation

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Overview

Background

Preservation System

Access System

Next Steps

Background

...with Andy and Drew

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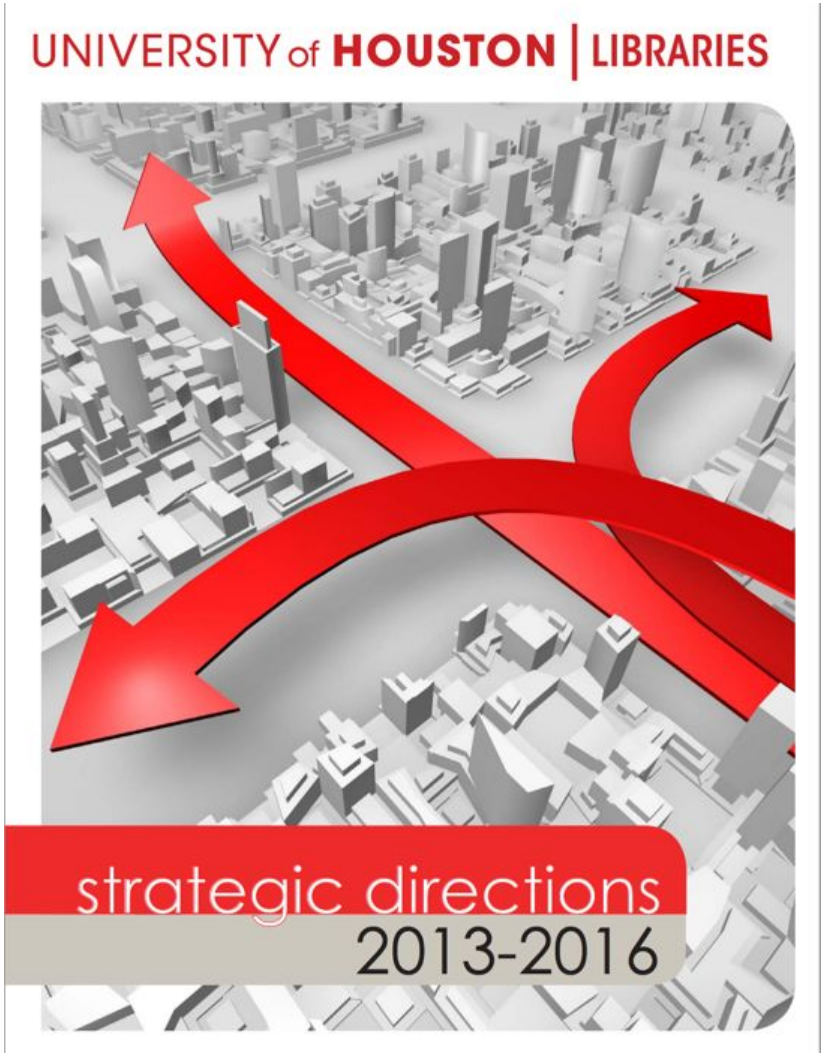
UH Libraries Task Forces

- 2014 to Present
- Digital Preservation Task Force (DPTF)
- Digital Asset Management System (DAMS) Implementation Task Force

UH Libraries Strategic Directions



"...work assiduously to expand our unique and comprehensive collections that support curricula and spotlight research. We will pursue seamless access and expand digital collections to increase national recognition."

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DAMS Task Force

- Evaluate DAMS Landscape
- Identify Viable Replacement Systems
- Test Systems
- Make Recommendation
- Implement System

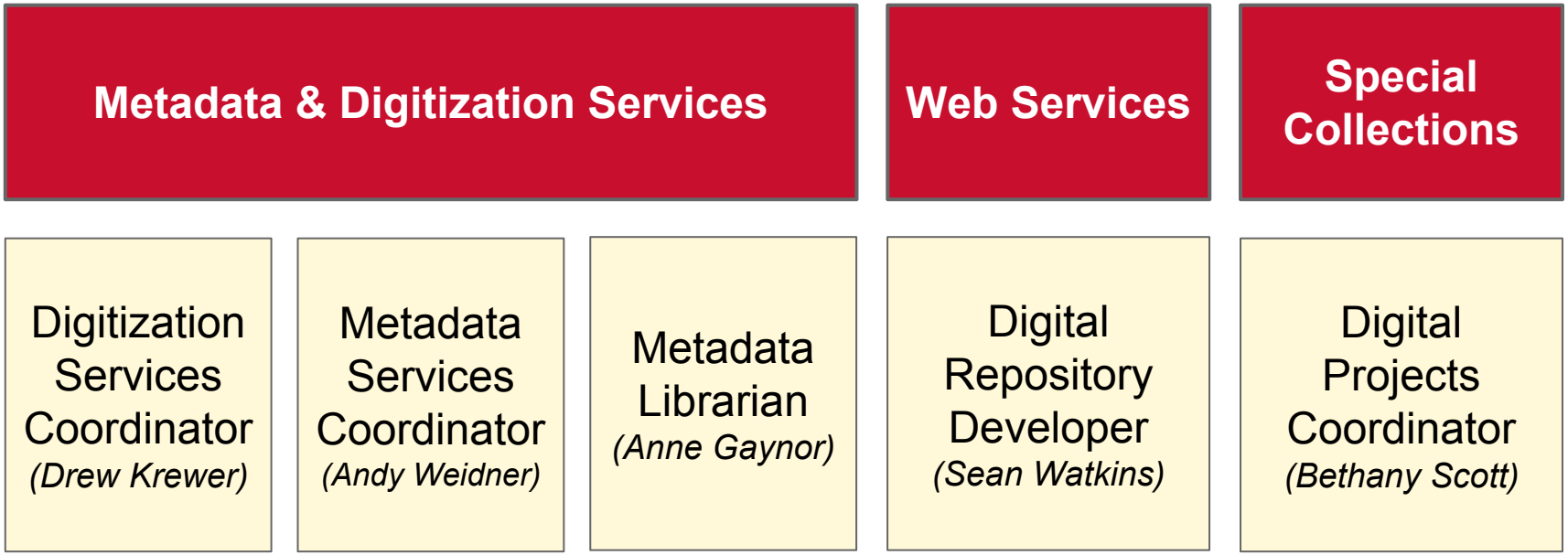
Digital Preservation Task Force

- Define Scope
- Articulate Priorities and Policies
- Determine Resources
- Align with TDL
- Recommend Next Steps

Digital Access & Preservation Working Group

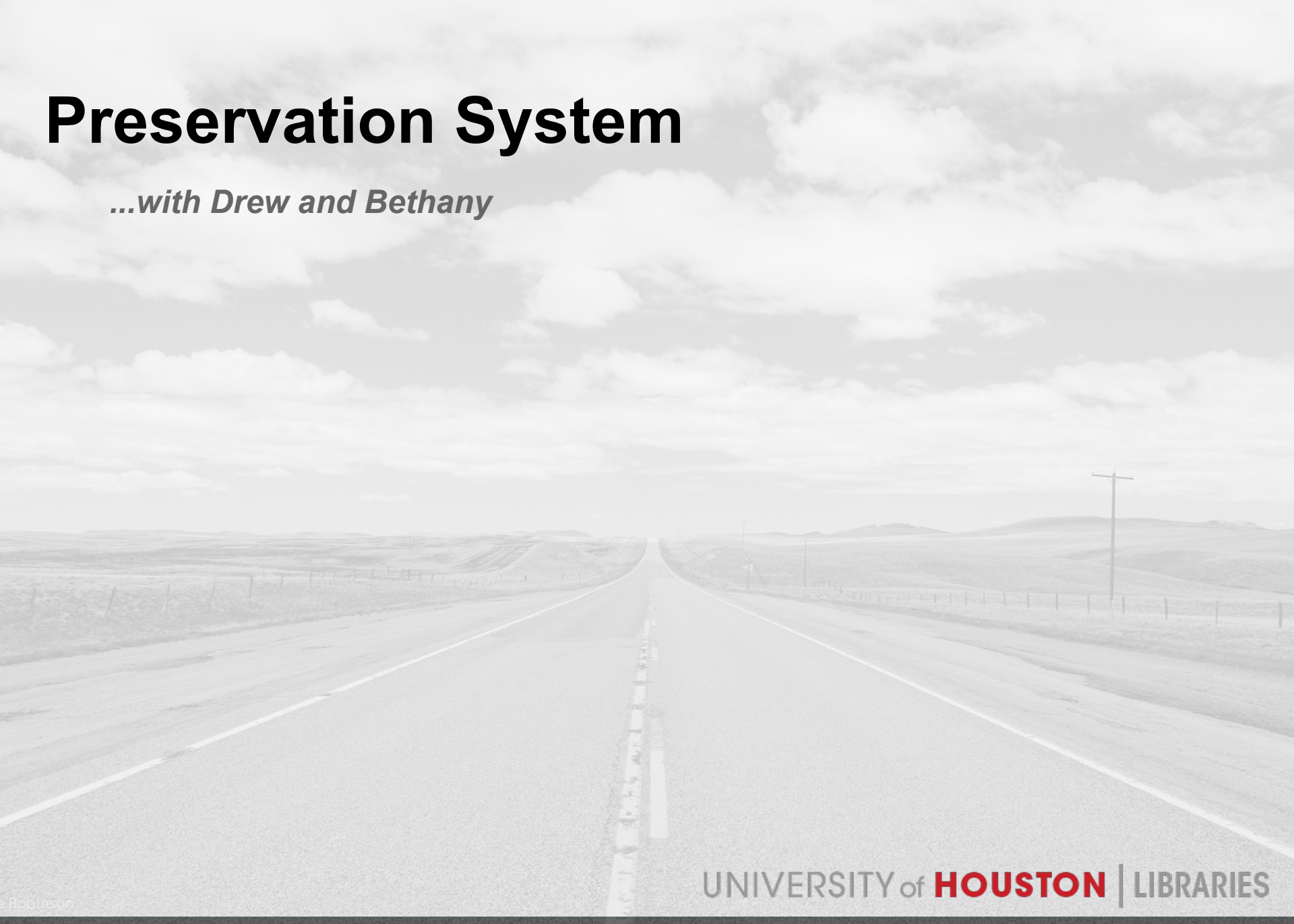
- Consists of members of the DAMS Task Force & the Digital Preservation Task Force
- Iterative development of workflows, tools, and documentation
- Transparently address preservation concerns throughout development lifecycle
- Communicates progress

The DAPWG Team



Preservation System

...with Drew and Bethany



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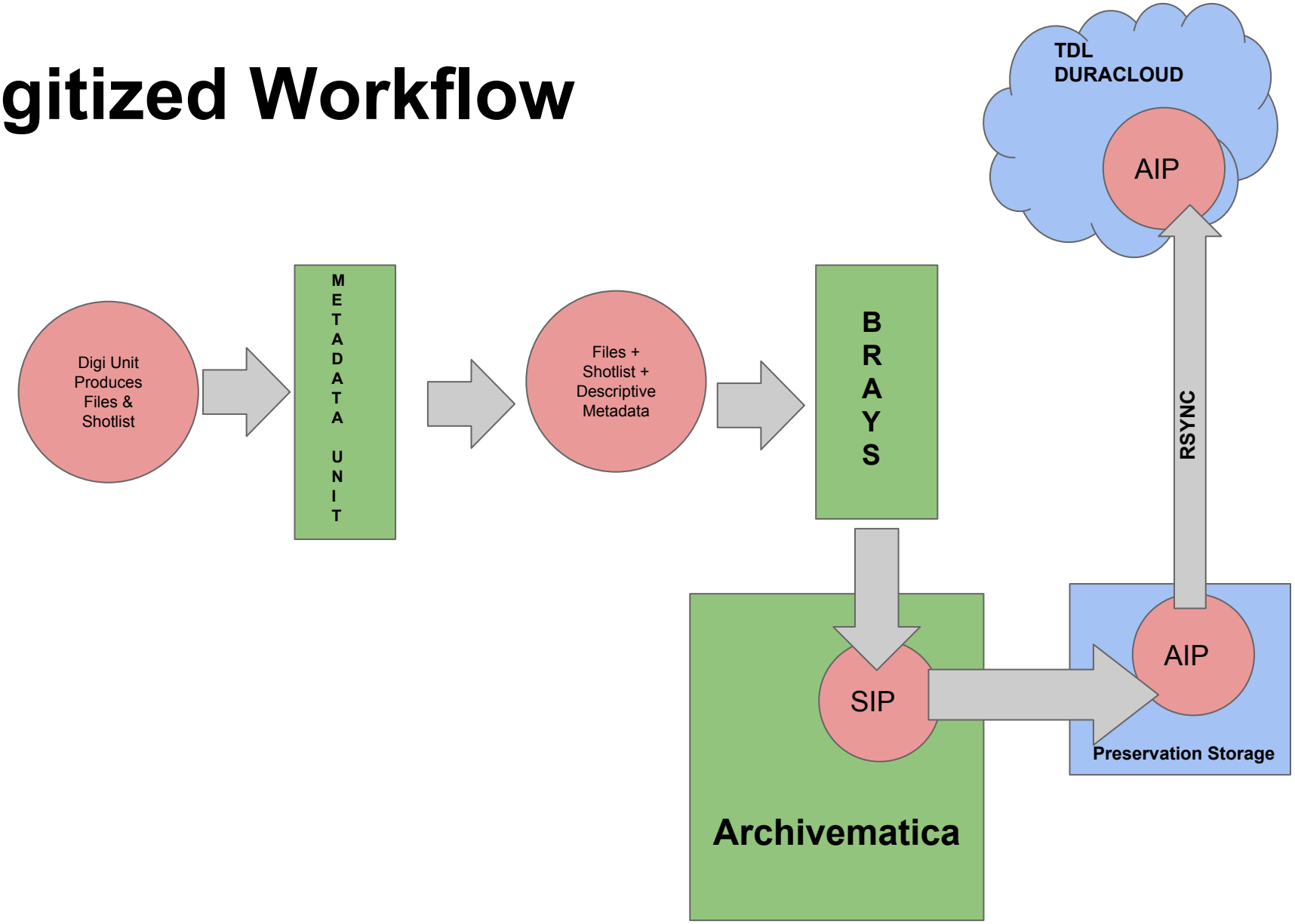
Archivematica Features

- Based on OAIS model & TDR specifications
- Uses METS, PREMIS, Dublin Core, and the LoC BagIt specification
- Open Source
- Microservices Model
- Customizable

Born Digital Workflow

- Acquire digital files on removable storage media
- Add collection/item info to digital media accessioning log
- Create disk image using FTK Imager
- Run bulk_extractor and fiwalk reports in BitCurator
- Create core descriptive metadata in metadata.csv
- Structure package for Archivematica
- Transfer and ingest through AM
- Create digital object in ArchivesSpace and add ARK

Digitized Workflow



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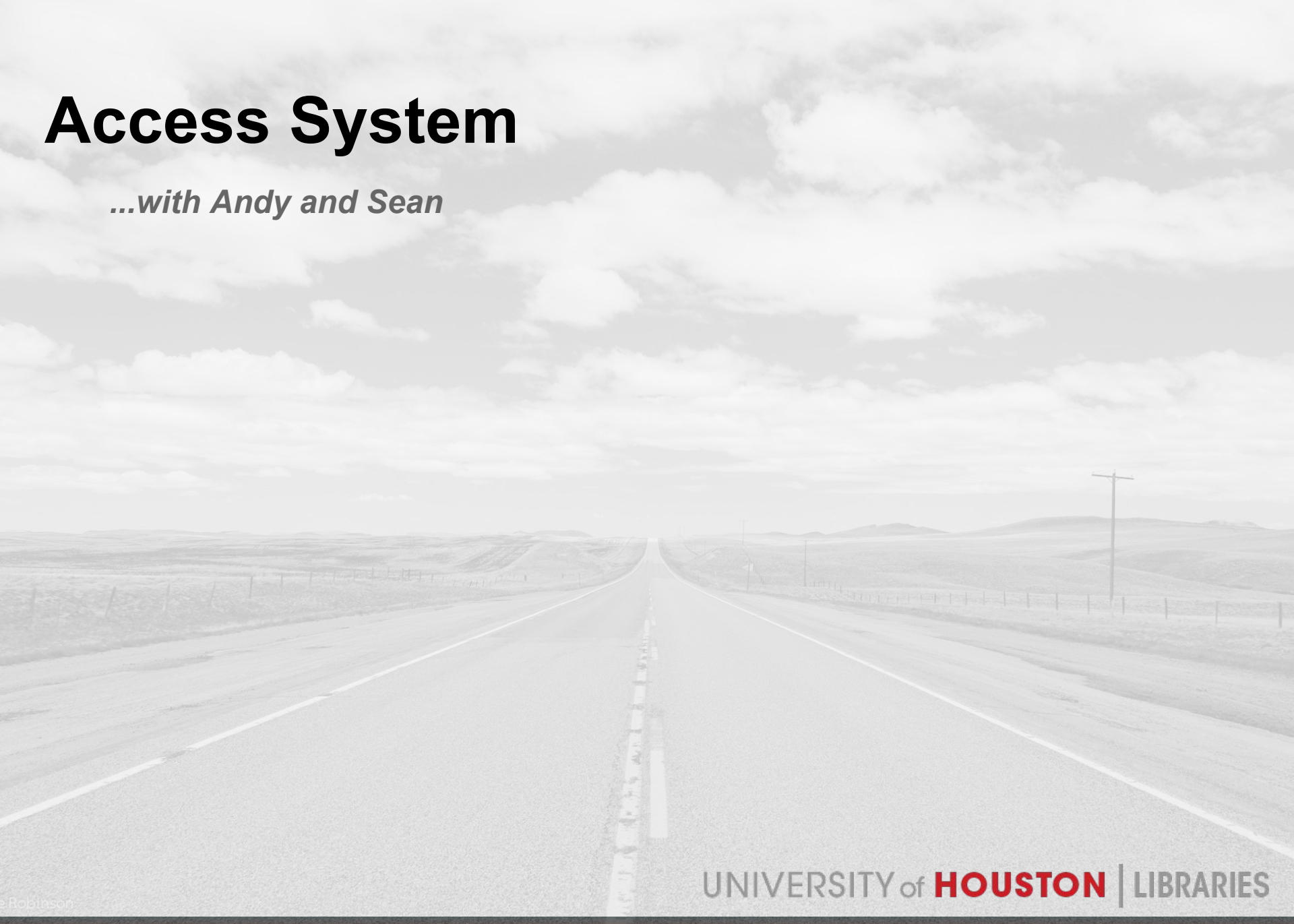
Access System

...with Andy and Sean



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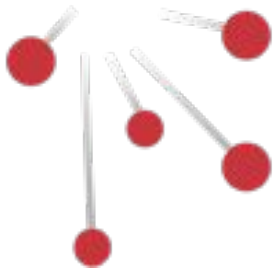
Bayou City DAMS

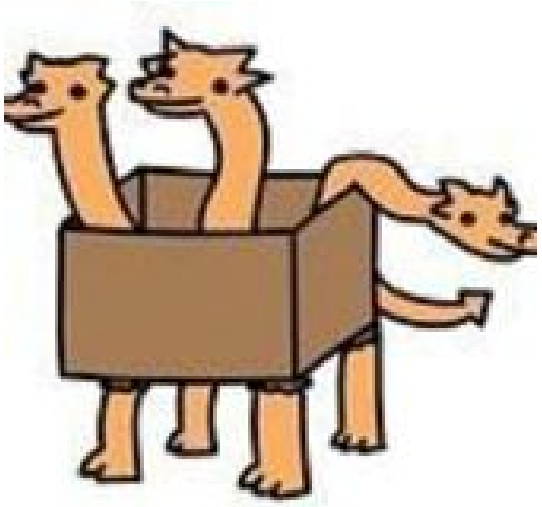
- Phase 1: Systems Installation
- Phase 2: Data Migration
- Phase 3: Interface Development
- Assessment, Documentation, and Training



Fedora™

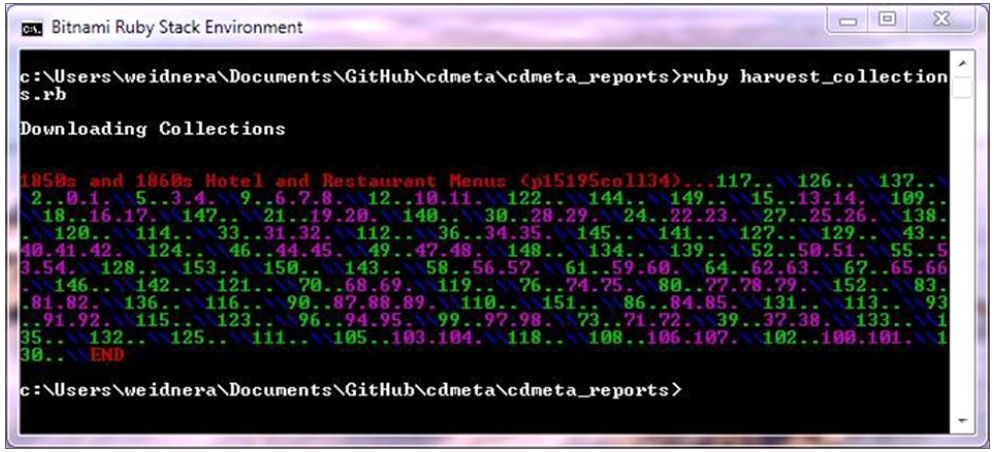
Armand: Hydra-in-a-Box

- Community Software
- Standards Based
  - DPLA MAP
  - PCDM
- Linked Data / DPLA Hubs
- Easier Long Term Maintenance



Buffalo: CONTENTdm Export

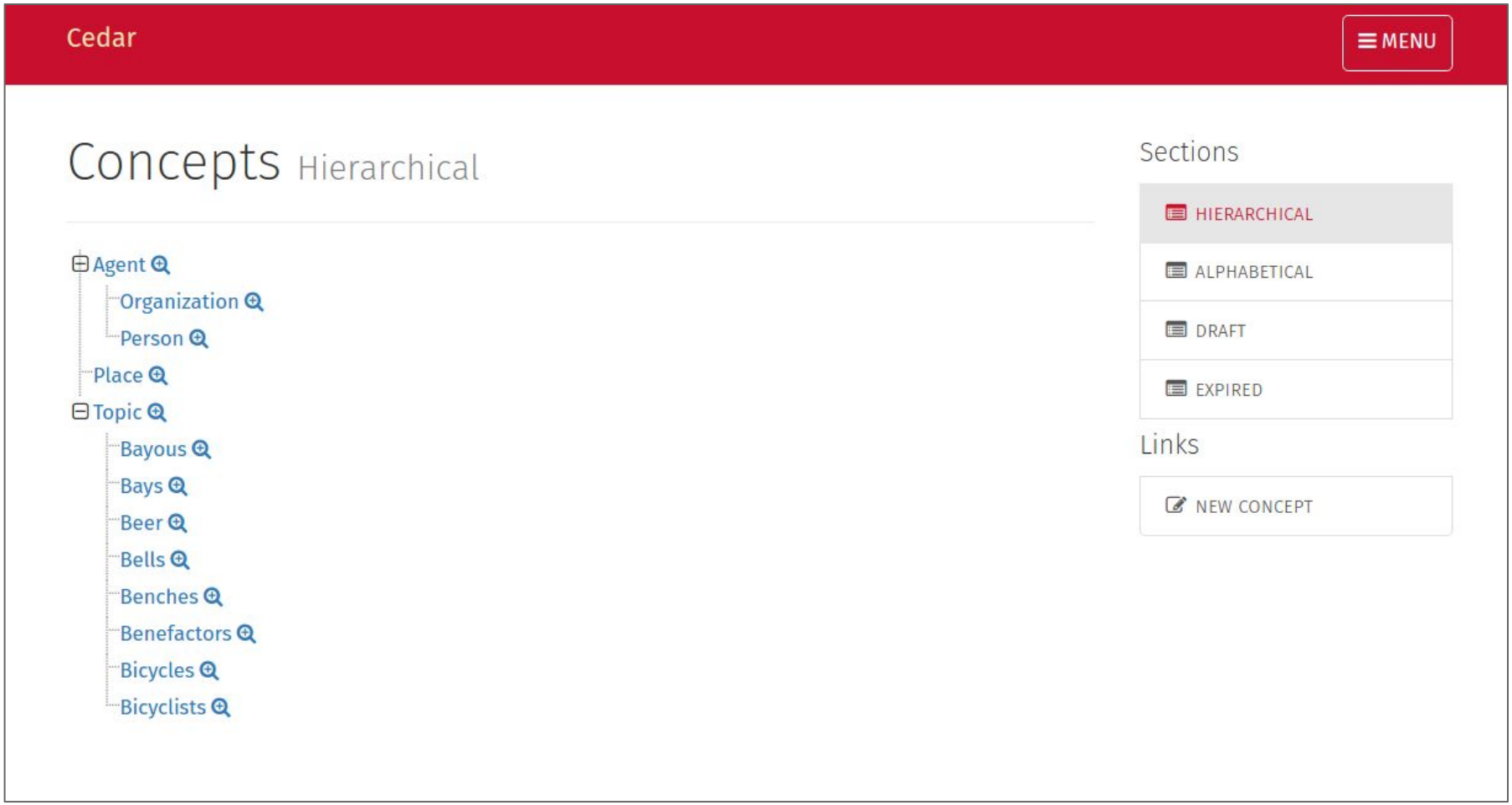
- Ruby Library
- CONTENTdm API
- Create Reports
- Contribute to Community



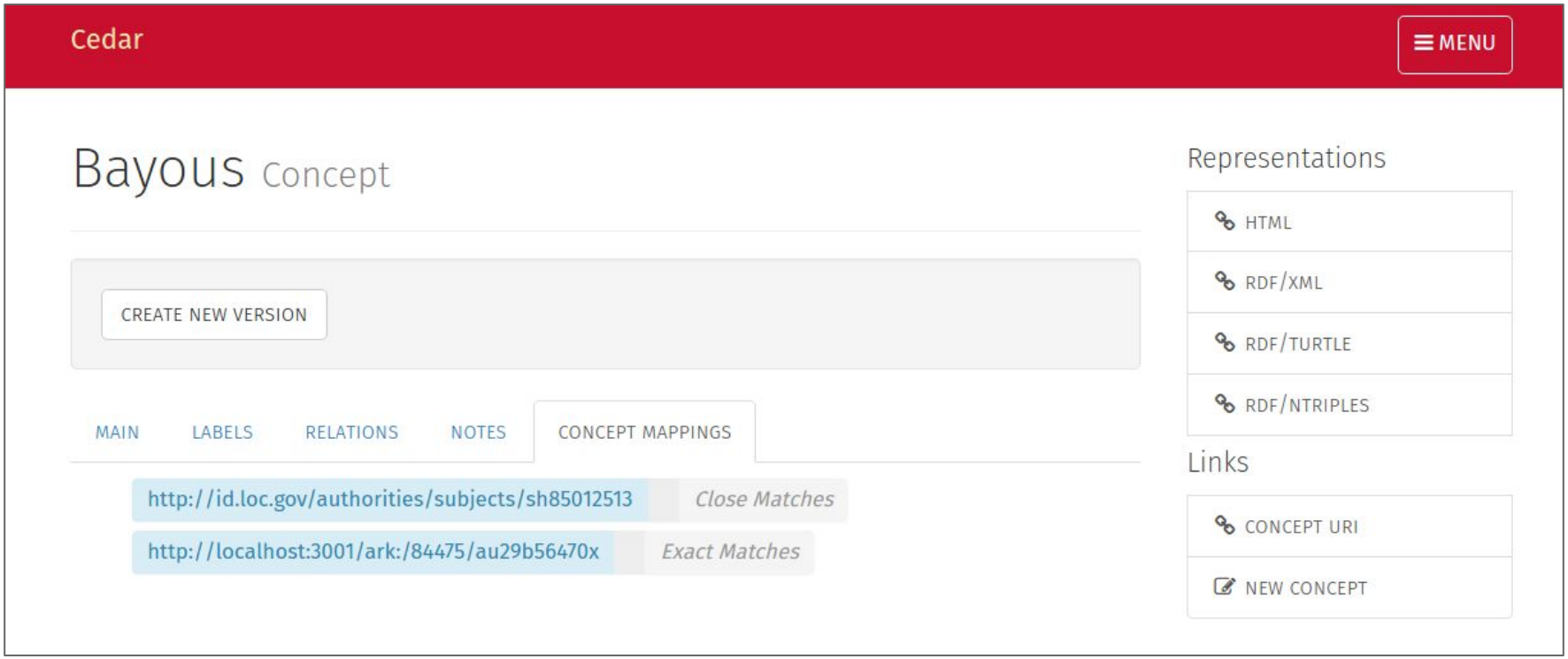
Cedar: Local Vocabulary Manager

- Ruby on Rails Gem: iQvoc
- Simple Knowledge Organization System (SKOS)
- Local Customizations
  - Theming
  - ARK Minter Integration

Cedar: Local Vocabulary Manager



Cedar: Local Vocabulary Manager



Cedar: Local Vocabulary Manager

```
@prefix : <http://localhost:3000/>.
@prefix dct: <http://purl.org/dc/terms/>.
@prefix foaf: <http://xmlns.com/foaf/spec/>.
@prefix iqvoc: <http://try.iqvoc.net/schema#>.
@prefix owl: <http://www.w3.org/2002/07/owl#>.
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>.
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>.
@prefix schema: <http://localhost:3000/schema#>.
@prefix skos: <http://www.w3.org/2004/02/skos/core#>.
@prefix void: <http://rdfs.org/ns/void#>.

:topic skos:prefLabel "Topic"@en.
:sh85012513 a skos:Concept;
            schema:memberOf :lcsh;
            skos:inScheme :scheme;
            skos:prefLabel "Bayous"@en;
            skos:broader :topic;
            skos:closeMatch <http://id.loc.gov/authorities/subjects/sh85012513>;
            skos:exactMatch <http://localhost:3001/ark:/84475/au29b56470x>.
```

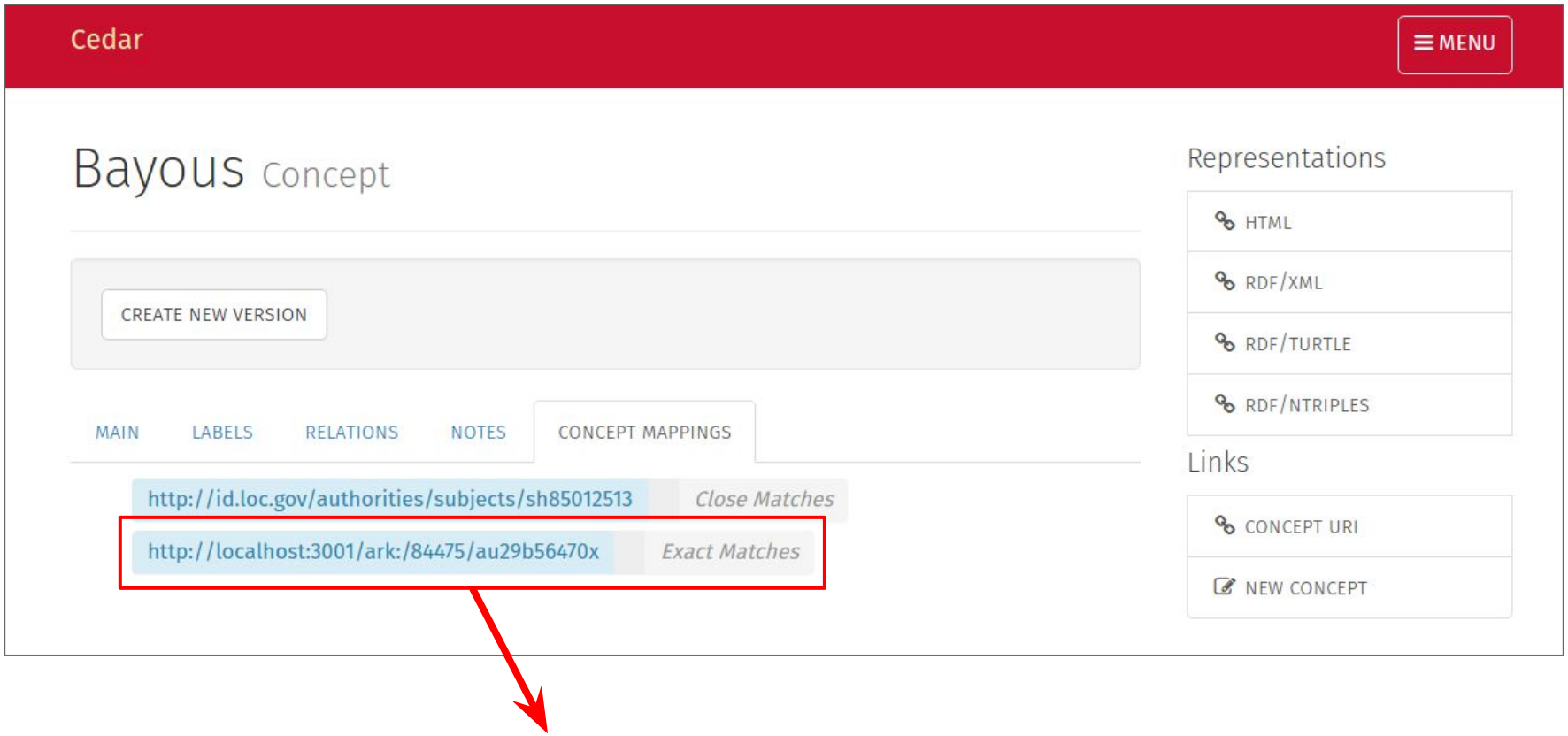
Greens: ID Minter & Resolver

- Ruby on Rails
- RESTful API

```
erc:
who: Northern France
what: Book of Hours, Use of Reims (Binding)
when: 1400-1499
where: http://digital.lib.uh.edu/collection/reims/item/20
```

- Mints Archival Resource Key (ARK) identifiers
- Resolves identifiers to target URLs
- Suffix Passthrough

Greens ARK Identifier

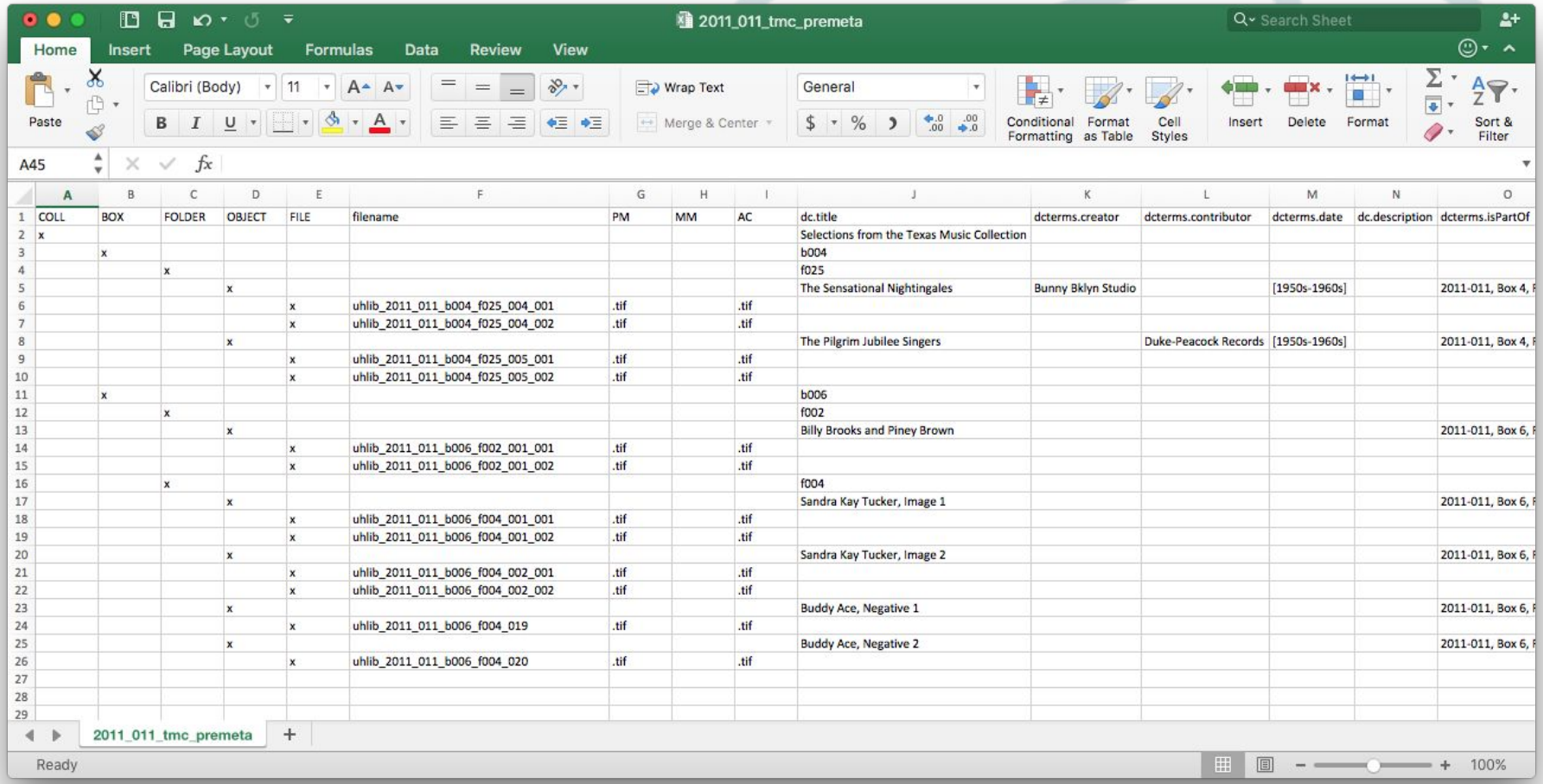


ark:/84475/au29b56470x

Brays: Ingest Utility

- Desktop application built off Electron framework
- Cross platform (Windows, MacOS, Linux)
- Inputs XSLT Metadata file
- Outputs Archivematica ingest package
- To-do: Hydra-in-a-box (Armand) ingest package

Brays: Ingest Utility



2011_011_tmc_premeta

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	COLL	BOX	FOLDER	OBJECT	FILE	filename	PM	MM	AC	dc.title	dcterms.creator	dcterms.contributor	dcterms.date	dc.description	dcterms.isPartOf
2	x									Selections from the Texas Music Collection					
3		x								b004					
4			x							f025					
5				x						The Sensational Nightingales	Bunny Bklyn Studio		[1950s-1960s]		2011-011, Box 4, F
6					x	uhlib_2011_011_b004_f025_004_001	.tif		.tif						
7					x	uhlib_2011_011_b004_f025_004_002	.tif		.tif						
8				x						The Pilgrim Jubilee Singers		Duke-Peacock Records	[1950s-1960s]		2011-011, Box 4, F
9					x	uhlib_2011_011_b004_f025_005_001	.tif		.tif						
10					x	uhlib_2011_011_b004_f025_005_002	.tif		.tif						
11		x								b006					
12			x							f002					
13				x						Billy Brooks and Piney Brown					2011-011, Box 6, F
14					x	uhlib_2011_011_b006_f002_001_001	.tif		.tif						
15					x	uhlib_2011_011_b006_f002_001_002	.tif		.tif						
16			x							f004					
17				x						Sandra Kay Tucker, Image 1					2011-011, Box 6, F
18					x	uhlib_2011_011_b006_f004_001_001	.tif		.tif						
19					x	uhlib_2011_011_b006_f004_001_002	.tif		.tif						
20				x						Sandra Kay Tucker, Image 2					2011-011, Box 6, F
21					x	uhlib_2011_011_b006_f004_002_001	.tif		.tif						
22					x	uhlib_2011_011_b006_f004_002_002	.tif		.tif						
23				x						Buddy Ace, Negative 1					2011-011, Box 6, F
24					x	uhlib_2011_011_b006_f004_019	.tif		.tif						
25				x						Buddy Ace, Negative 2					2011-011, Box 6, F
26					x	uhlib_2011_011_b006_f004_020	.tif		.tif						
27															
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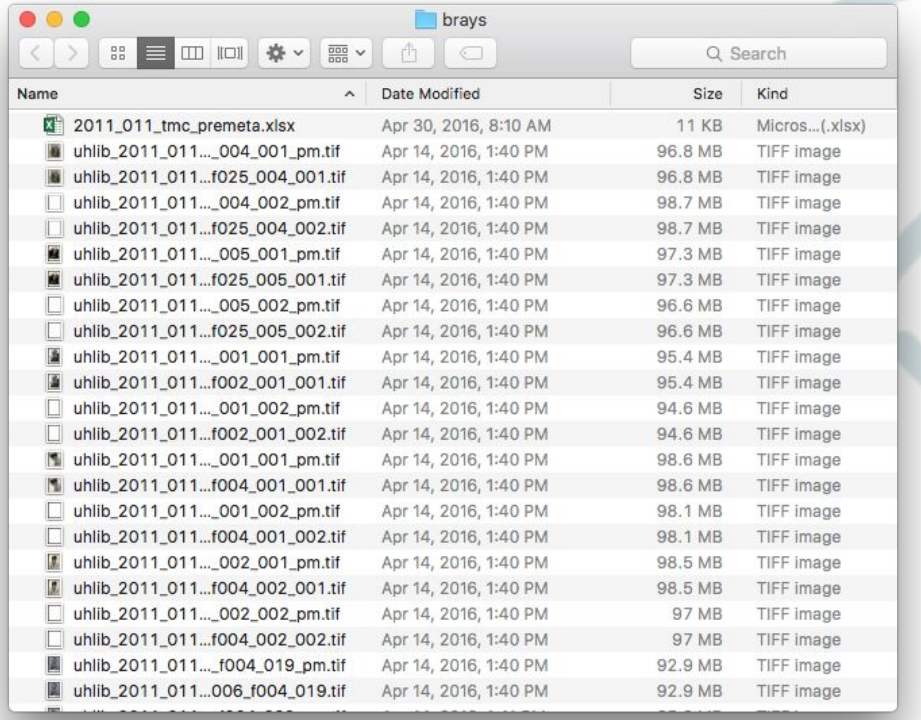
Brays: Ingest Utility



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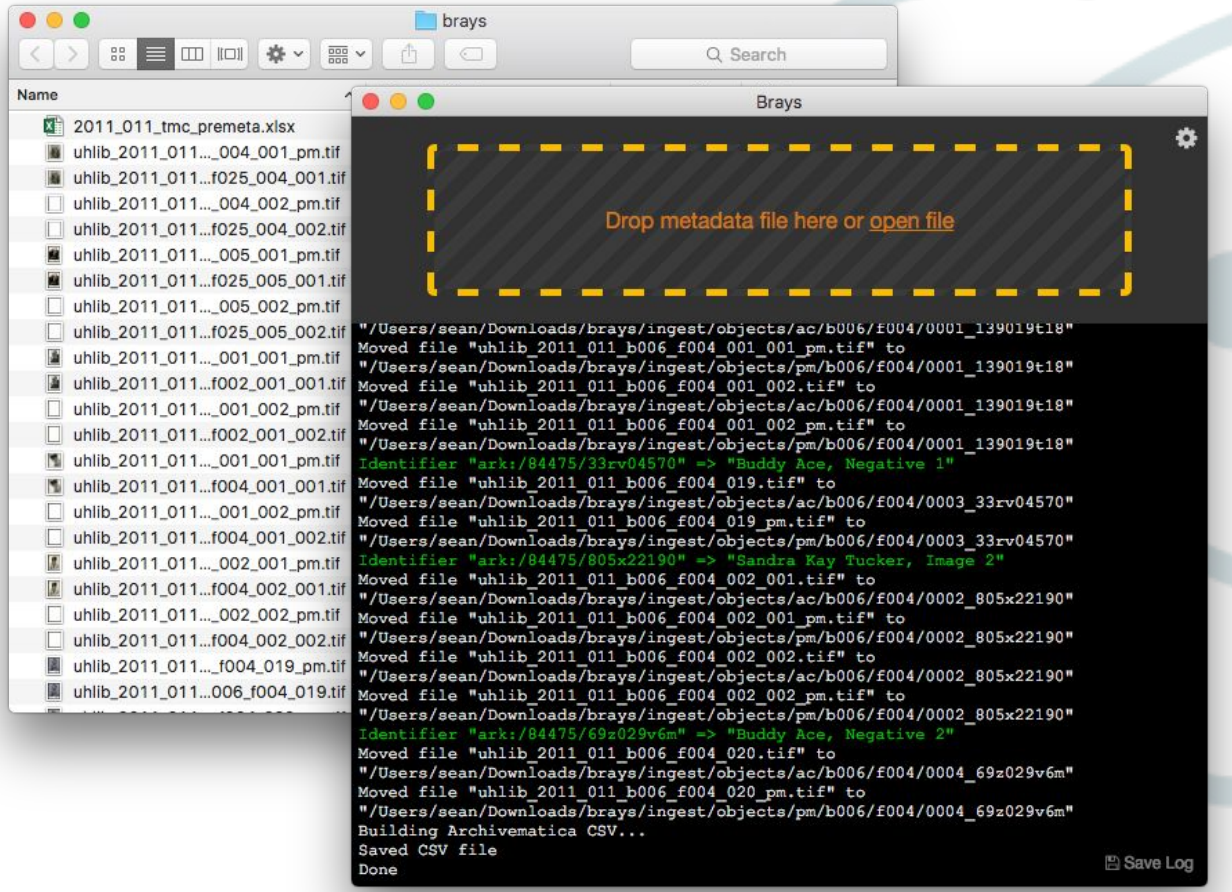

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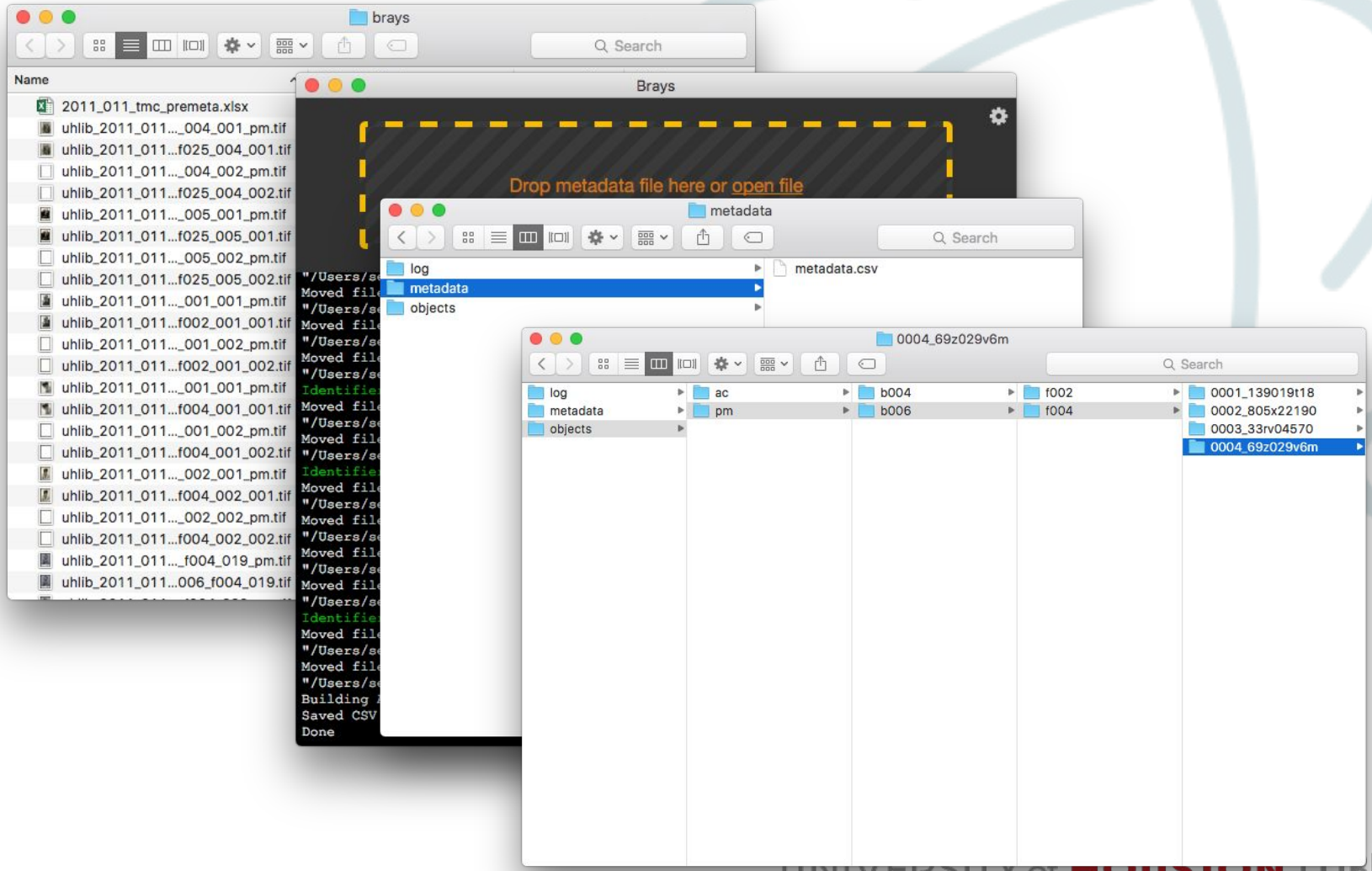

Next Steps

...with Sean and Bethany

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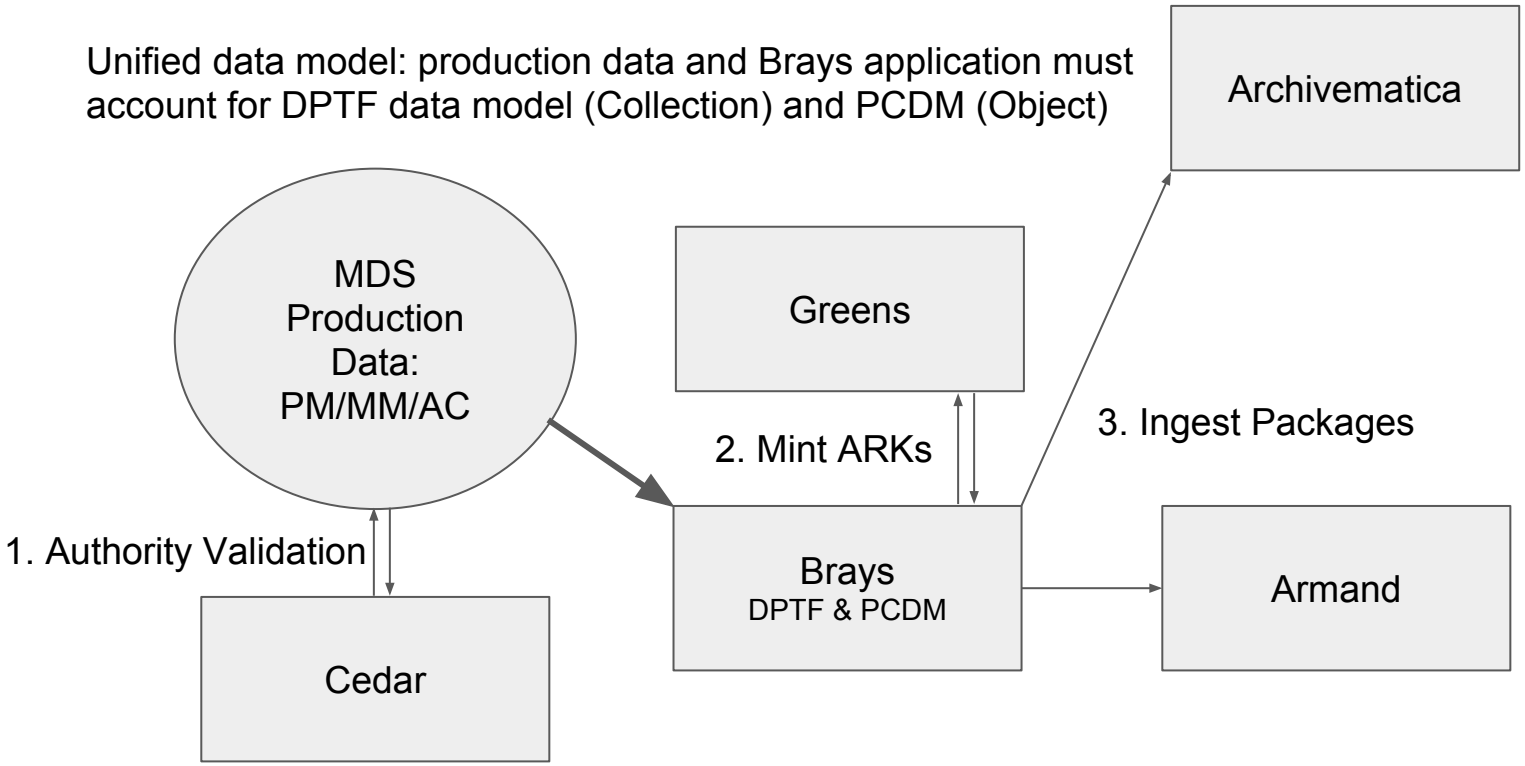
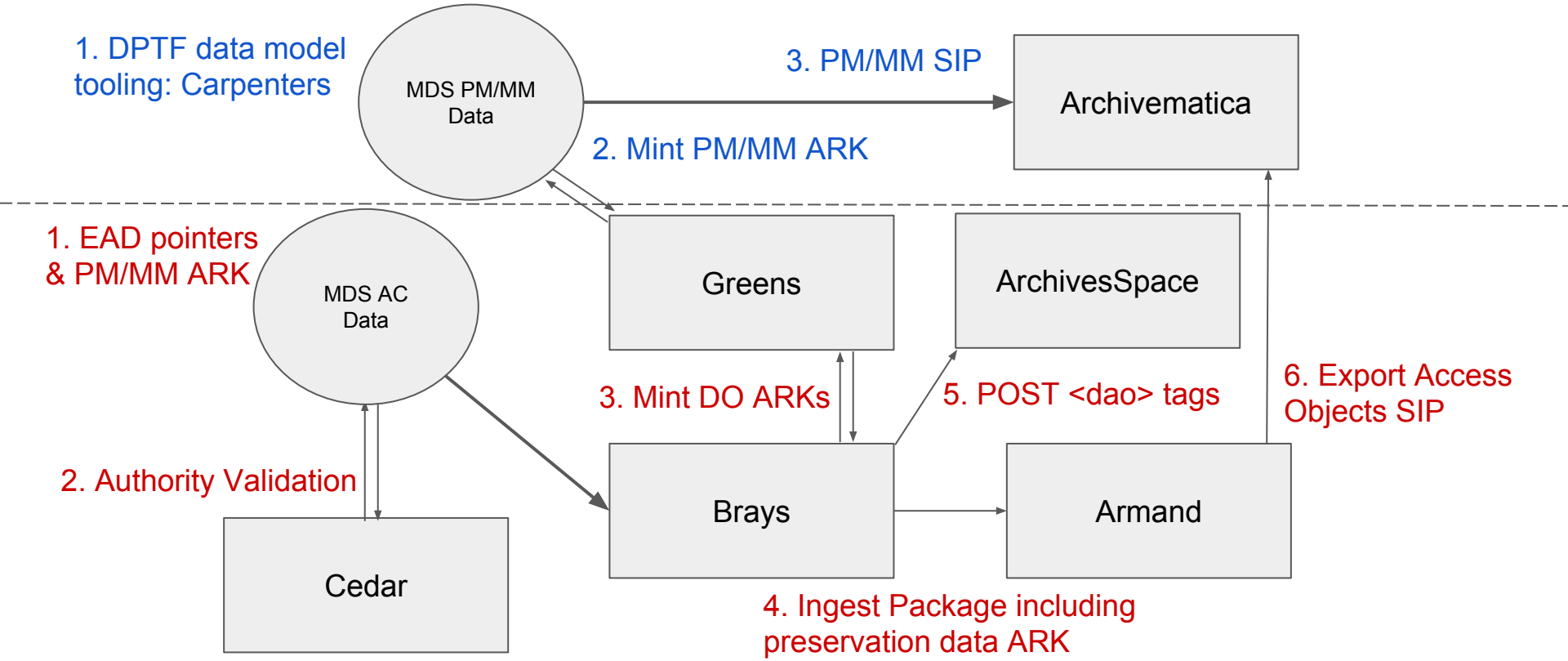
Workflow Challenges



Next Steps: DAMS



Next Steps: Archivematica

- Continue refining born digital workflows
- Scale up transfers with move to production instance
- Assess and update digital preservation policy

Thank you!

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Andy Weidner, Metadata Services Coordinator, ajweidner@uh.edu

GitHub: https://github.com/uhlibraries-digital/