

# From Theory to Action

A pragmatic approach to  
digital preservation strategies and tools

November 13, 2015

Co-Sponsored by:

South Dakota SHRAB



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# Logistics/Housekeeping

- Basic Logistics
- Handouts/Flash Drives
- Assessment/Evaluation (today and in 3 months) YOUR FEEDBACK IS VITAL
  - Pre-Test
  - Post-Test
  - Standard Workshop Evaluation
  - 3 Month Follow-up

**First Up... The Day's Schedule!**

## MORNING

### **Now – 9:45**

Collect Pre-tests  
Expected Outcomes  
Who we are & How we got here  
Levels of Preservation (*Activity*)

### **9:45 – 10:15**

Solution in Theory vs. Solution in Practice

**10:15 → Break**

### **10:30 – 11:00**

Your Pre-Ingest Workflow  
Accessioning a Collection (*Demo*)

### **11:00 – Noon**

Tools that POWRR investigated

## **LUNCH!**

## AFTERNOON

### **1:00 – 2:00**

Solution in Action: Accessioning a Collection (*Activity*)

### **2:00 – 2:30**

Assembling Your Team  
Your 3-3-3 Action Plan (*Activity*)

**2:30 → Break**

### **2:45 – 3:30**

Advocacy, Policy, Potential Solution Models

### **3:30 – 3:50**

Questions

### **3:50 – 4:00**

Post-Test

# Expected Outcomes

- You will understand that different digital preservation tools/services can perform different functions within the digital curation lifecycle, and be able to explain how these tools/services can be used within your institution's workflow.
- You will practice the initial pre-ingest steps necessary to accession a digital collection, as described in the OCLC report "Walk this Way," and gain the skills necessary to repeat this process at your institution.
- You will gain hands on experience with a basic digital preservation tool and understand how it can be used within your institution's workflow.
- You will take away resources that help align communication and advocacy, policymaking, and tool selection/implementation.
- You will create a 3-3-3 Action Plan to implement in the following 3 months that will move you closer to your digital preservation goals.



## Who we are....and how we got here....

- Defining Moments → Found Some Friends
- Applied for Implementation Grant → Received a “Figure It Out” Grant → Received NEH grant

We’ve learned a lot...and are a lot like you!

Proud to be works-in-progress:



Northern Illinois  
University



WESTERN  
ILLINOIS  
UNIVERSITY



# Activity Time!

## 20 Minutes

### NDSA Levels of Preservation

Where can my institution place its Bingo chips?

- We'll go first
- Small Groups – Where do you think you fit in? (10 minutes)
- All Together – Poll of who is where!



**NATIONAL DIGITAL  
STEWARDSHIP ALLIANCE**



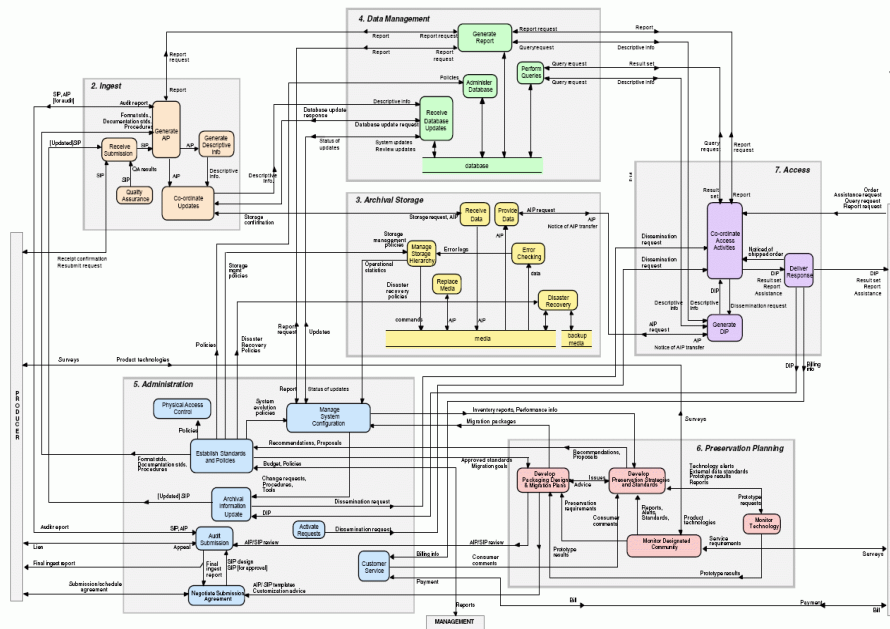
Table 1: Version 1 of the Levels of Digital Preservation

	Level 1 (Protect your data)	Level 2 (Know your data)	Level 3 (Monitor your data)	Level 4 (Repair your data)
Storage and Geographic Location	<ul style="list-style-type: none"> <li>- Two complete copies that are not collocated</li> <li>- For data on heterogeneous media (optical discs, hard drives, etc.) get the content off the medium and into your storage system</li> </ul>	<ul style="list-style-type: none"> <li>- At least three complete copies</li> <li>- At least one copy in a different geographic location</li> <li>- Document your storage system(s) and storage media and what you need to use them</li> </ul>	<ul style="list-style-type: none"> <li>- At least one copy in a geographic location with a different disaster threat</li> <li>- Obsolescence monitoring process for your storage system(s) and media</li> </ul>	<ul style="list-style-type: none"> <li>- At least three copies in geographic locations with different disaster threats</li> <li>- Have a comprehensive plan in place that will keep files and metadata on currently accessible media or systems</li> </ul>
File Fixity and Data Integrity	<ul style="list-style-type: none"> <li>- Check file fixity on ingest if it has been provided with the content</li> <li>- Create fixity info if it wasn't provided with the content</li> </ul>	<ul style="list-style-type: none"> <li>- Check fixity on all ingests</li> <li>- Use write-blockers when working with original media</li> <li>- Virus-check high risk content</li> </ul>	<ul style="list-style-type: none"> <li>- Check fixity of content at fixed intervals</li> <li>- Maintain logs of fixity info; supply audit on demand</li> <li>- Ability to detect corrupt data</li> <li>- Virus-check all content</li> </ul>	<ul style="list-style-type: none"> <li>- Check fixity of all content in response to specific events or activities</li> <li>- Ability to replace/repair corrupted data</li> <li>- Ensure no one person has write access to all copies</li> </ul>
Information Security	<ul style="list-style-type: none"> <li>- Identify who has read, write, move and delete authorization to individual files</li> <li>- Restrict who has those authorizations to individual files</li> </ul>	<ul style="list-style-type: none"> <li>- Document access restrictions for content</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain logs of who performed what actions on files, including deletions and preservation actions</li> </ul>	<ul style="list-style-type: none"> <li>- Perform audit of logs</li> </ul>
Metadata	<ul style="list-style-type: none"> <li>- Inventory of content and its storage location</li> <li>- Ensure backup and non-collocation of inventory</li> </ul>	<ul style="list-style-type: none"> <li>- Store administrative metadata</li> <li>- Store transformative metadata and log events</li> </ul>	<ul style="list-style-type: none"> <li>- Store standard technical and descriptive metadata</li> </ul>	<ul style="list-style-type: none"> <li>- Store standard preservation metadata</li> </ul>
File Formats	<ul style="list-style-type: none"> <li>- When you can give input into the creation of digital files encourage use of a limited set of known open formats and codecs</li> </ul>	<ul style="list-style-type: none"> <li>- Inventory of file formats in use</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor file format obsolescence issues</li> </ul>	<ul style="list-style-type: none"> <li>- Perform format migrations, emulation and similar activities as needed</li> </ul>

<http://www.digitalpreservation.gov/ndsa/activities/levels.html>

# So.....How do we get from here to there?

# Solution in Theory



## Scary OAS Spaghetti Monster

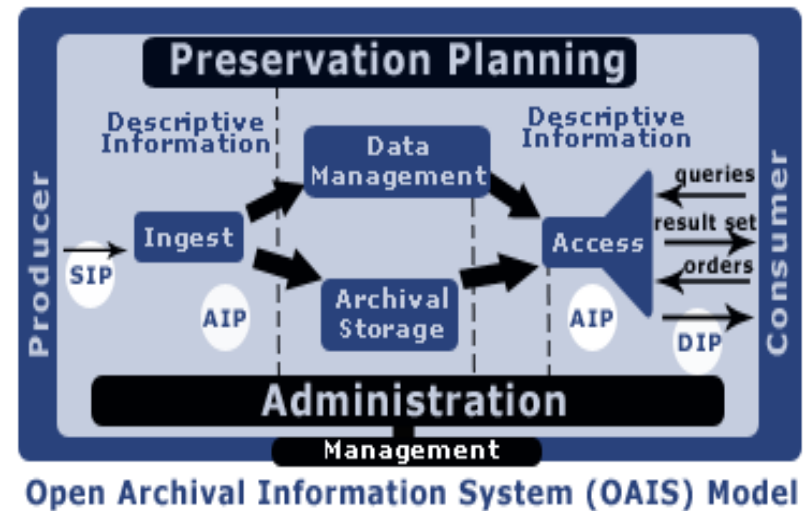
**VS.**

## Solution in Practice



# Solution in Theory

- OAIS (Open Archival Information Systems) and other schematic models
- TRAC Certification (Trustworthy Repositories Audit & Certification)
- TDR ISO 16363 (Trustworthy Digital Repository ISO Standard)
- Curation Lifecycles that don't look a thing like our current workflows



*SIPs, AIPs, DIPs, Oh my!*

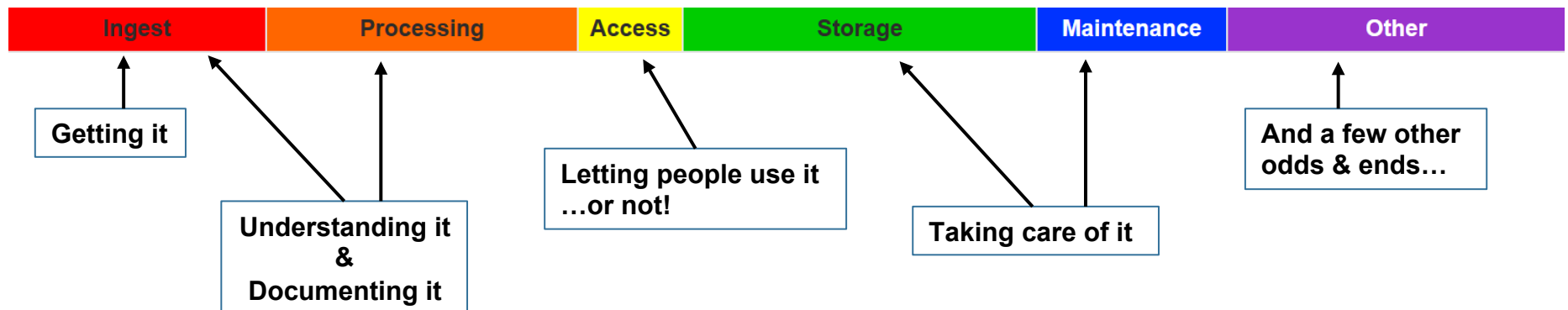
# **We can be *ready*.**

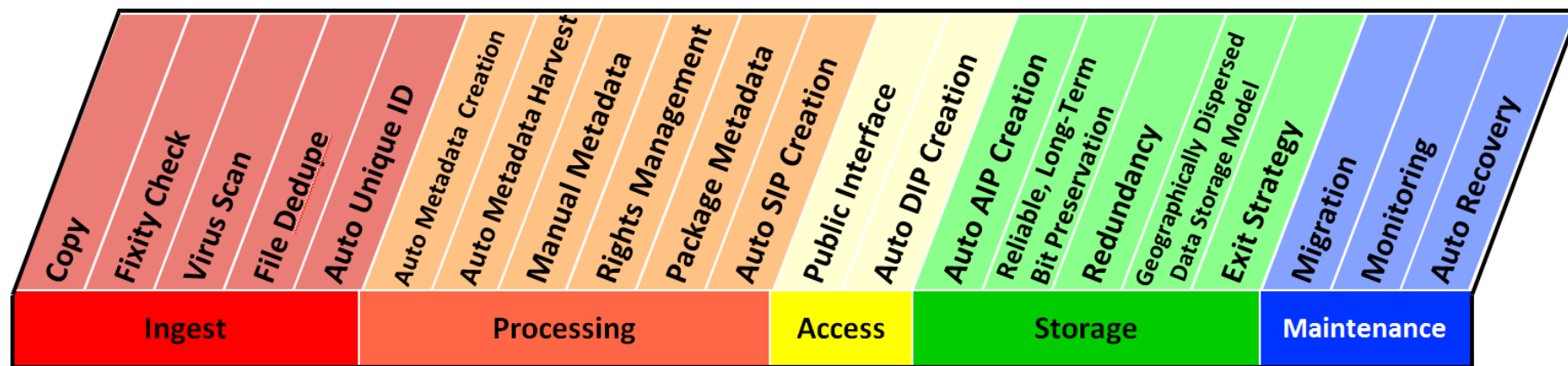
- We can intellectually map how digital preservation works to how *we* work.
- We can upgrade our metadata and recordkeeping practices for the next steps.
- We can triage our data for ingest.
- We can build policies and plans, which in turn help us choose tools.
- We can better educate ourselves, our stakeholders, and our funders.

# Solution in Practice

AKA Good Enough DP for real people!!

Our take on what you need to consider when thinking about your digital stuff.....





Our take on some things that need to happen or be considered along the way to this *“Digital Preservation”* thing....



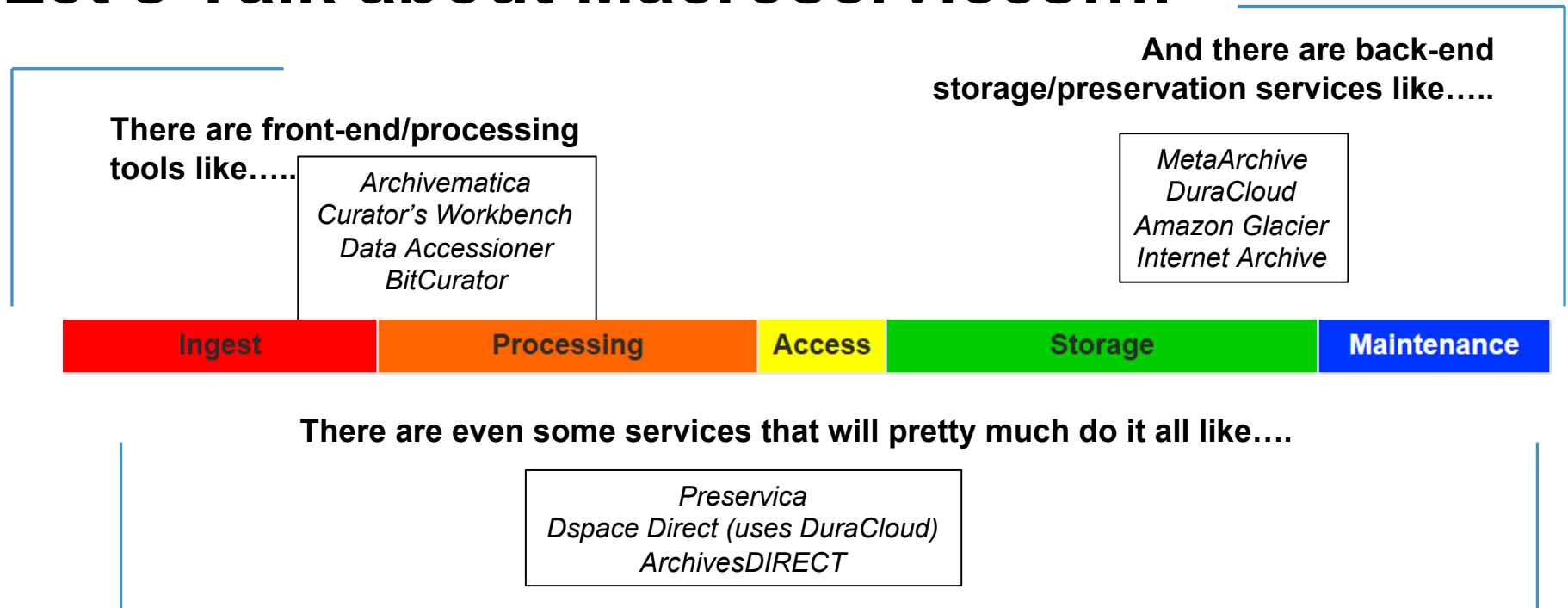
# Solution in Practice

**AKA Good Enough DP for real people!!**

Some things to keep in mind.....

- Not all tools and services are created equal.
  - Some tools/services do specific tasks (*microservices*).
  - Some tools/services combine multiple microservices (*you guessed it....macroservices!*).
- Starting small is good enough!
- Knowing what you have is crucial.
  - Write. It. Down. And maintain it.

# Let's Talk about Macroservices....



AND you have to figure out what works best with what!!! But we have done some of that so you don't have to!

# Clarification: Preservation vs. Access

## Long term access (Preservation)

- **Purpose:** ensure long-term access
- **Focus:** current & **future** users
- Relies on **proven (reliable)** technologies to preserve digital objects across generations of technology
- **Accumulates** metadata over the life cycle to trace preserved content
- Preservation systems **create** new versions of digital objects for access to deliver as needs change over time

## Short term access

- **Purpose:** provide content to users now
- **Focus:** current
- Relies on **cutting edge** technologies to provide best and fastest access at a point in time
- **Selects** metadata needed to use and understand content
- Access systems **deliver** objects with user-oriented services

**BREAK TIME!**

**Back by 10:30, please**

Next up: Your Pre-Ingest Workflow

# Actual Conversation, ca. 2004

“I’d like our institution  
to be the home for  
your literary papers.”

\*gets handed flash  
drive\*



# Don't Panic - Your Pre-Ingest Workflow

aka Wrangling your digital stuff before you can get it into a shiny system

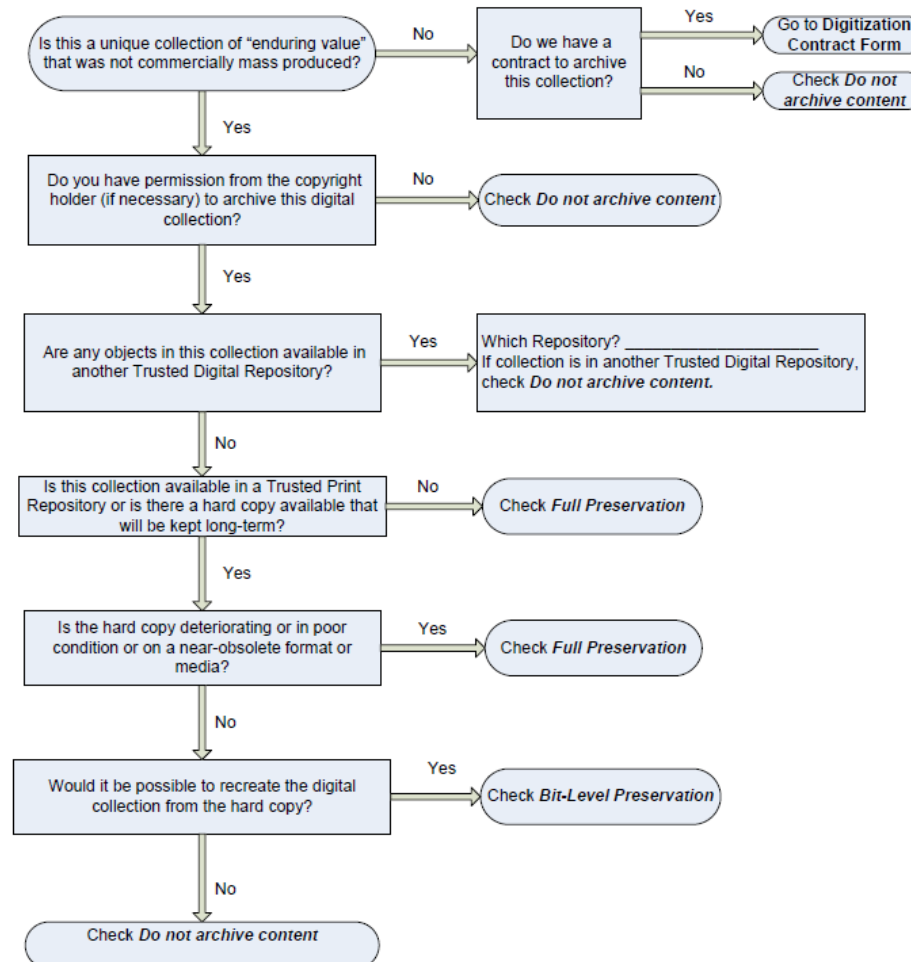
**NOTE:** This is only ONE way to do this... Everyone's workflow is a little different!

*Hang tight for a demo  
and some hands-on  
practice of this!*

## Starting from scratch:

- Begin an Inventory Spreadsheet
- Run accessioning tools (creates basic preservation metadata files in XML for you!)
  - Move everything to a stable carrier (like a network drive)
- Make an Access Copy from your Master Copy
- Continue populating Inventory Spreadsheet (if needed)
- OPTIONAL: Keep original media
  - ✓ *Most of these will cost you more time than money*
  - ✓ *Document what you do pre-ingest. For future you.*
  - ✓ *Remember: Good enough is just fine. For now.*

## DIGITAL PRESERVATION DECISION FLOWCHART



\_\_\_\_ DO NOT PRESERVE  
 \_\_\_\_ FULL PRESERVATION  
 \_\_\_\_ BIT-LEVEL PRESERVATION

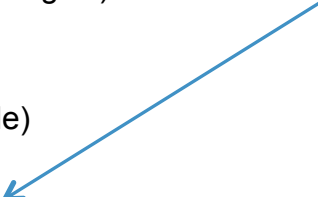
**Courtesy of:**  
 Tawnya Keller, *Digital Preservation Archivist*  
 University of Utah

# Pre-Ingest Inventory Spreadsheet Categories

These suggestions follow the recommended DPOE step “Identify” as locally defined by curator/archivist. Example at: [http://www.carli.illinois.edu/sites/files/digital\\_collections/documentation/digipres\\_identify.pdf](http://www.carli.illinois.edu/sites/files/digital_collections/documentation/digipres_identify.pdf)

- ☐ Category (digitization project; born digital; university archives)
- ☐ Title and Description
- ☐ Date(s) (date range of what’s IN there or date of creation if born digital)
- ☐ Location (CD, Jump drive, server location?)
- ☐ Extent (quantity: 48 journal issues; 106 images; 2 TB of video)
- ☐ Format (file formats: PDF, .Jpeg, Animated GIF, Wordstar2.0 file)

**This is YOUR inventory... YOU get to decide if it needs additional fields, if some can be deleted, etc. You are the boss of this!**



Category	Title and Description	Date	Location	Extent	Format
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**FILL OUT WHAT YOU CAN AS YOU WOULD WITH ANY NORMAL ACCESSION**



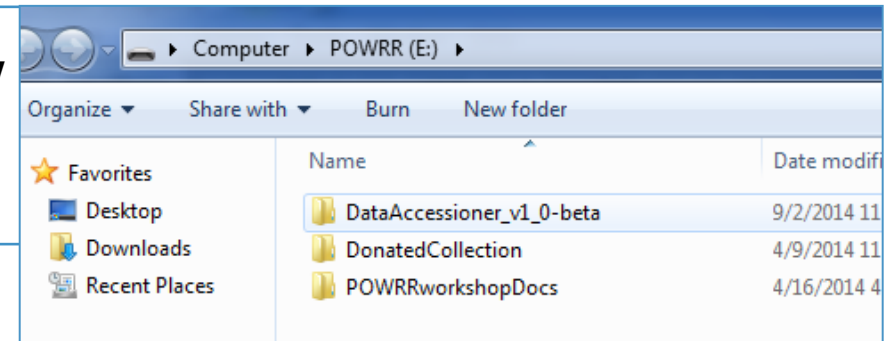
Category	Title & Description	Date	Location	Extent	Format
(locally defined; project name? content creation method?)	(Donor applied and/or yours... what's your local practice?)	(YYYYMMDD or other locally defined format for accession date)	(Storage place of choice -- networked server recommended)	(Quantity of folders, files, by type or total size)	(What extensions are involved: .jpg, .tif, .xls?)
Special Collections, mixed; digitized and born digital	A Curator's Cat Collection. Donated by Jane (nee Pennypincher) and John Moneybags, Class of 2006. Feline Health Research. No restrictions on access; some material may have copyright restrictions by law	20150424	C:\Users\User\Desktop\NewAccession\Masters		

# Data Accessioner

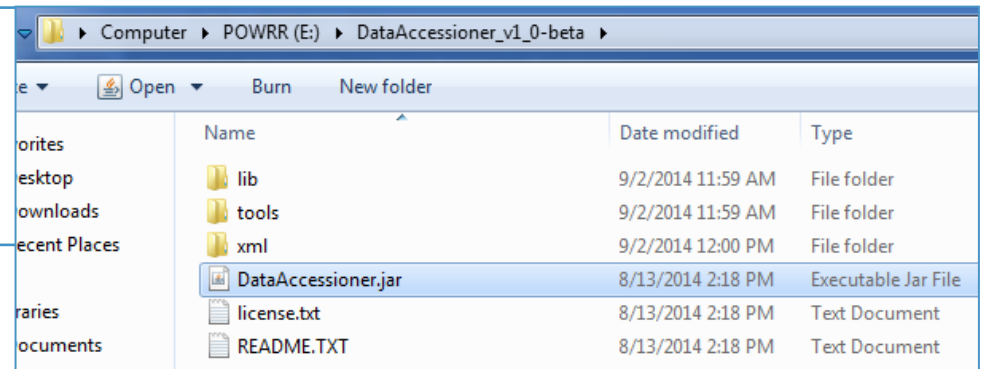
[illegible]

## 1. Insert flash drive and open the explorer window

Data Accessioner  
Donated Collection Folder  
Other stuff.....



## 2. Navigate to DataAccessioner.jar and open it



Switch to live Data Accessioner demo

# XML Output

Basic descriptive and Dublin Core metadata that you created

```
<?xml version="1.0" encoding="UTF-8"?>
<collection name="Curator's Cat Collection" xmlns="http://dataaccessioner.org/schema/dda-0-3-1">
  - <accession number="2014-Sept-02">
    - <folder name="A Curator's Cat Collection" last_modified="2014-04-09T11:59:08.000">
      - <dcx:description xmlns:dcx="http://purl.org/dc/xml/">
        <dc:description xmlns:dc="http://purl.org/dc/elements/1.1/">A quirky collection of kitties</dc:description>
        <dc:source xmlns:dc="http://purl.org/dc/elements/1.1/">Wealthy Donor x</dc:source>
        <dc:title xmlns:dc="http://purl.org/dc/elements/1.1/">A Curator's Cat Collection</dc:title>
      </dcx:description>
    - <folder name="Stacey's Kitties" last_modified="2014-04-09T11:59:08.000">
      - <file name="10154101_10103012097484377_1732212283_n.jpg" last_modified="2014-04-02T17:21:50.000">
        - <premis:object xsi:type="premis:file" xmlns:uuid="java:java.util.UUID" xmlns:fits="http://hul.harvard.edu
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:premis="info:lc/xmlns/premis-v2">
          - <premis:objectIdentifier>
            <premis:objectIdentifierType>uuid</premis:objectIdentifierType>
            <premis:objectIdentifierValue>5096d91f-407c-40db-8362-ae2d784b26f2</premis:objectIdentifierVal
            </premis:objectIdentifier>
          - <premis:objectCharacteristics>
            <premis:compositionLevel>0</premis:compositionLevel>
          - <premis:fixity>
            <premis:messageDigestAlgorithm>MD5</premis:messageDigestAlgorithm>
            <premis:messageDigest>3ab9f14fec4526582c1686e36e4b4706</premis:messageDigest>
            <premis:messageDigestOriginator>OIS File Information</premis:messageDigestOriginator>
          </premis:fixity>
          <premis:size>80112</premis:size>
        - <premis:format>
          - <premis:formatDesignation>
            <premis:formatName>JPEG File Interchange Format</premis:formatName>
            <premis:formatVersion>1.01</premis:formatVersion>
          </premis:formatDesignation>
          <premis:formatNote>Identified by: Exiftool v9.13</premis:formatNote>
        </premis:format>
        - <premis:format>
          - <premis:formatDesignation>
            <premis:formatName>JPEG image data</premis:formatName>
          </premis:formatDesignation>
          <premis:formatNote>Identified by: file utility v5.03</premis:formatNote>
        </premis:format>
      </premis:object>
    - <premis:objectIdentifier>
      <premis:objectIdentifierType>uuid</premis:objectIdentifierType>
      <premis:objectIdentifierValue>5096d91f-407c-40db-8362-ae2d784b26f2</premis:objectIdentifierVal
      </premis:objectIdentifier>
    - <premis:objectCharacteristics>
      <premis:compositionLevel>0</premis:compositionLevel>
    - <premis:fixity>
      <premis:messageDigestAlgorithm>MD5</premis:messageDigestAlgorithm>
      <premis:messageDigest>3ab9f14fec4526582c1686e36e4b4706</premis:messageDigest>
      <premis:messageDigestOriginator>OIS File Information</premis:messageDigestOriginator>
    </premis:fixity>
    <premis:size>80112</premis:size>
  - <premis:format>
    - <premis:formatDesignation>
      <premis:formatName>JPEG File Interchange Format</premis:formatName>
      <premis:formatVersion>1.01</premis:formatVersion>
    </premis:formatDesignation>
    <premis:formatNote>Identified by: Exiftool v9.13</premis:formatNote>
  </premis:format>
  - <premis:format>
    - <premis:formatDesignation>
      <premis:formatName>JPEG image data</premis:formatName>
    </premis:formatDesignation>
    <premis:formatNote>Identified by: file utility v5.03</premis:formatNote>
  </premis:format>
</pre>
```

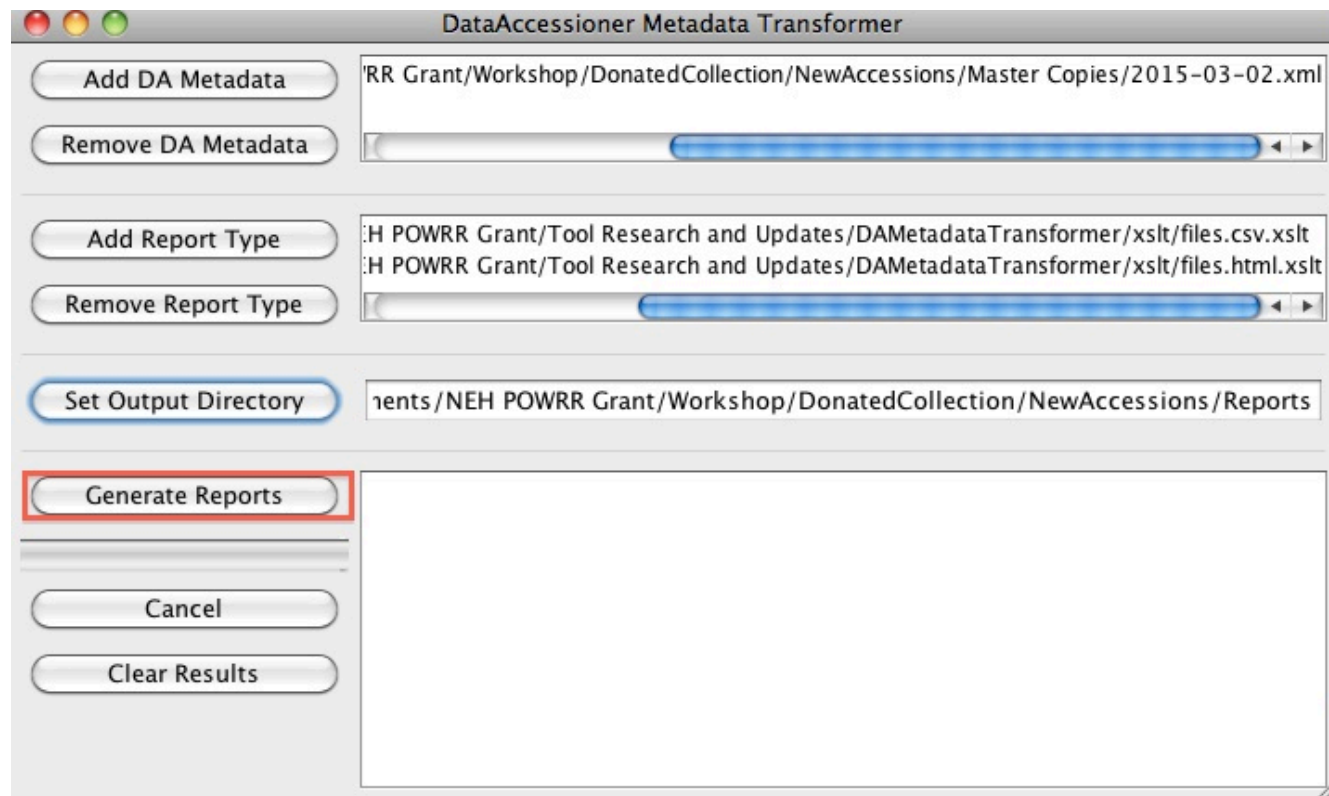
Extracted metadata:  
tree hierarchy of your  
accession  
(folder names, file  
names, last modified,  
size, and more!)

Fixity/Checksum: MD5

Identifying  
Information  
(Exiftool)

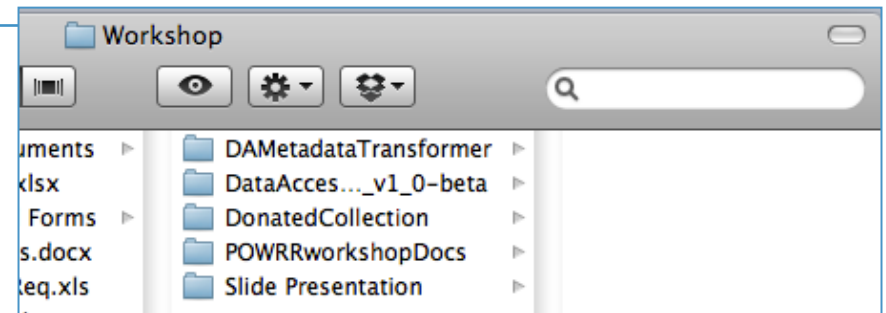
Identifying  
Information  
(file utility)

# DataAccessioner: Metadata Transformer

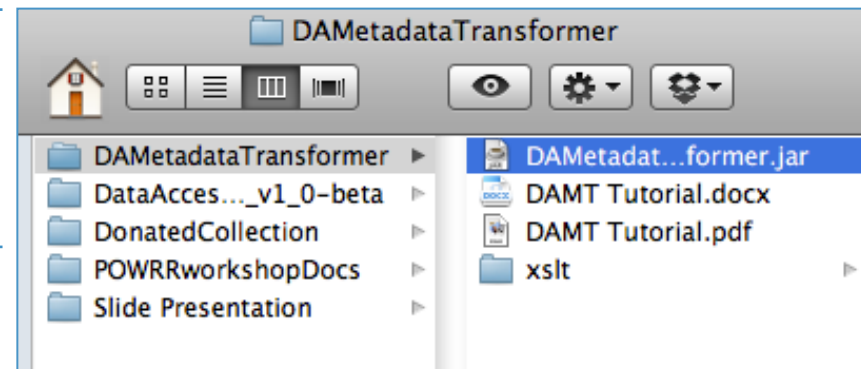


**1. Open the Explorer Window and  
open DAMetadataTransformer Folder**

Data Accessioner  
Donated Collection Folder  
DAMetadataTransformer  
Others...



**2. Navigate to DAMetadataTransformer.jar  
and open it**



Switch to live DA:MT Reporting Tool demo



Category	Title & Description	Date	Location	Extent	Format
(locally defined; project name? content creation method?)	(Donor applied and/or yours... what's your local practice?)	(YYYYMMDD or other locally defined format for accession date)	(Storage place of choice -- networked server recommended)	(Quantity of folders, files, by type or total size)	(What extensions are involved: .jpg, .tif, .xls?)
Special Collections, mixed; digitized and born digital	A Curator's Cat Collection. Donated by Jane (nee Pennypincher) and John Moneybags, Class of 2006. Feline Health Research. No restrictions on access; some material may have copyright restrictions by law	20150424	C:\Users\User\Desktop\NewAccession\Masters	38.83 MB	11 jpg, 1 pdf, 3 PDF/A, 2 MPEG v4

# Congratulations!

You just did the first few steps in the digital curation lifecycle.

Digital POWRR Tool Evaluation Grid	Ingest				Processing						Access		Storage				Maintenance			Other				
	Copy	Fixity Check	Virus Scan	File Dedupe	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
Duke Data Accessioner	x	x			x	x	x	x		x	x											x		Free

Well, we did it. *Your turn* comes after lunch!

But first..... Macroservices! WOO!

# Macroservices: Doing it all! Sort of.

Using simple tools, like Data Accessioner, is what you can do while you are petitioning your institution for a more robust solution like...

- Archivematica
- Curator's Workbench
- DuraCloud
- MetaArchive
- Preservica
- Internet Archive

## **Please Keep In Mind...**

This is NOT exhaustive

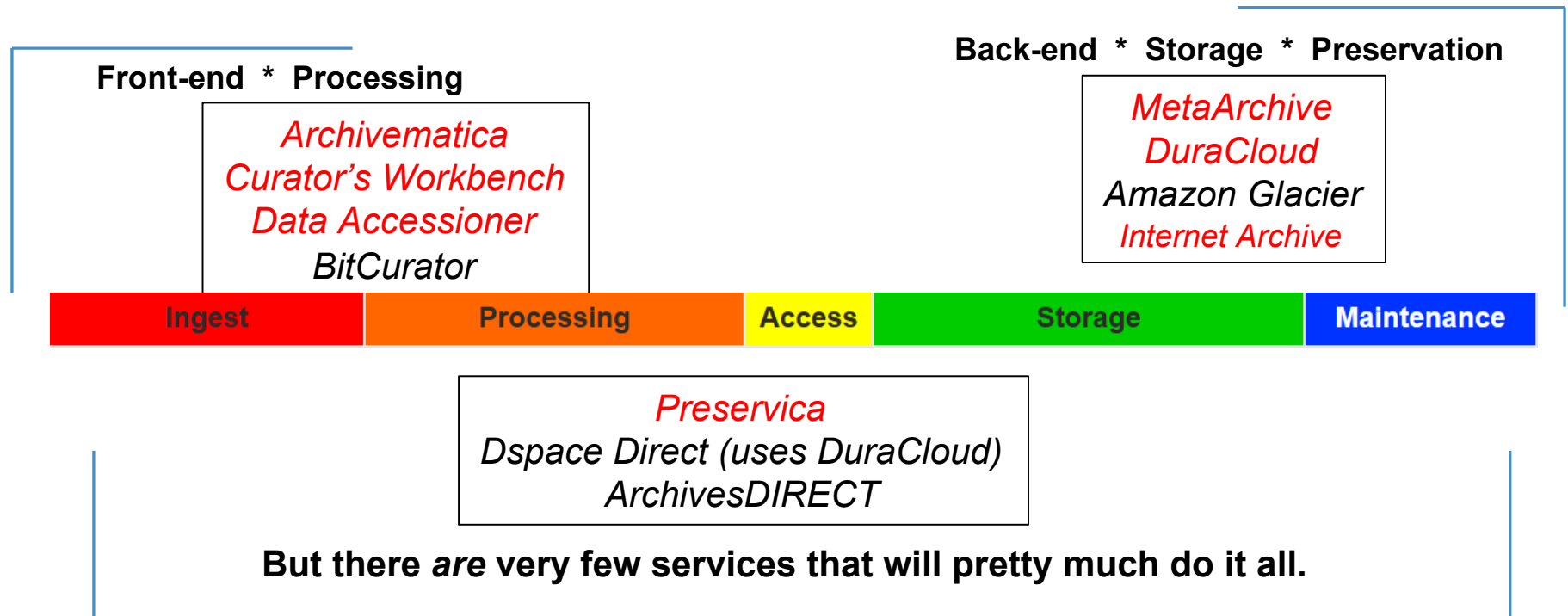
Software changes quickly!

Based on availability at time of testing and our perceived needs

# Remember this?

Most tools and services only perform *some* of the functions in a digital curation lifecycle.

*\*Tools/Services in RED were tested in-depth by POWRR*



# A note about the word “free”



NOT



Open source software requires resources to install, maintain, and improve it.

## Front-end/Processing: Curator's Workbench

[illegible]

# Front-end/Processing: Archivematica

Digital POWRR Tool Evaluation Grid	Ingest				Processing						Access		Storage				Maintenance			Other				
	Copy	Fixity Check	Virus Scan	File Dedupe	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
**Archivematica	x	x	x		x	x	x	x	x	x	x		x	x					x			x	x	Free

# Front-end/Processing: Archivematica

- Open source/free software
- Requires IT support and administration (Virtual Machine, Ubuntu Server, etc.)
- Microservices run by themselves
- Shows all the steps for AIP, SIP, DIP
- Capability to upload own metadata
- Errors stop everything
- Great Google users group support
- Integrates with Content DM & DSpace
- Bundled with ICA-AToM (archival content management system like ARCHON)
- Hosted version now available
- File transfers not intuitive
- Slower processing, but that could be due to the fact that we are used to desktop-based applications



# Archivematica: Transfer Collection

Archivematica FPR Server x Archivematica Dashboard x

localhost/transfer/#

Archivematica ICA-Atom Elasticsearch B... AM FAQ - Archi... Archivematica ...

Other Bookmarks

archivematica Transfer Ingest Archival storage Preservation Planning Access Administration x Connected

Standard Type Transfer name Accession no. /home Browse Start transfer

Transfer	UUID	Transfer start time
Sample series	89a46845-0bcd-4917-a482-ea004a798b9a	2013-10-10 13:06
Micro-service: Create SIP from Transfer		
Job: Create SIP(s) [?]	Awaiting decision	Actions
Job: Load options to create SIPs	Completed successfully	
Job: Check transfer directory for objects	Completed successfully	
Micro-service: Complete transfer		
Micro-service: Characterize and extract metadata		
Job: Load labels from metadata/file_labels.csv	Completed successfully	
Job: Characterize and extract metadata	Completed successfully	
Job: Identify file format	Completed successfully	
Job: Determine which files to identify	Completed successfully	
Job: Select file format identification command	Completed successfully	
Job: Move to select file ID tool	Completed successfully	
Micro-service: Clean up names		
Micro-service: Scan for viruses		

# Archivematica: Normalization On Ingest

The screenshot shows the Archivematica dashboard with the 'Ingest' tab selected. The submission 'Sample\_series' (UUID: 2c5fedbf-b302-4939-8f8c-10f3ae5f79dd) is shown with an ingest start time of 2013-10-10 13:13. The process is in the 'Awaiting decision' state. A dropdown menu is open, showing options: 'Normalize for preservation and access' (highlighted), 'Normalize for preservation', 'Reject SIP', 'Normalize service files for access', 'Do not normalize', 'Normalize manually', and 'Normalize for access'.

Submission Information Package	UUID	Ingest start time
Sample_series	2c5fedbf-b302-4939-8f8c-10f3ae5f79dd	2013-10-10 13:13
Micro-service: Normalize		
Job: Normalize [?]	Awaiting decision	Actions
Job: Resume after normalization file identification tool selected.	Completed	- Normalize for preservation and access
Job: Identify file format	Completed	- Normalize for preservation
Job: Select pre-normalize file format identification command	Completed	- Reject SIP
Job: Move to select file ID tool	Completed	- Normalize service files for access
Job: Set resume link after tool selected.	Completed	- Do not normalize
Job: Find options to normalize as	Completed successfully	- Normalize manually
Job: Move to workFlowDecisions-createDip directory	Completed successfully	- Normalize for access
Job: Grant normalization options for no pre-existing DIP	Completed successfully	
Job: Set remove preservation and access normalized files to renormalize link.	Completed successfully	
Job: Check for Access directory	Completed successfully	
Job: Check for Service directory	Completed successfully	
Job: Identify manually normalized files	Completed successfully	

# Archivematica: Add Metadata

archivematica. Transfer <sup>2</sup> Ingest <sup>2</sup> Archival storage Preservation Planning Access Administration x

[Ingest](#) / / [Test\\_files](#) / / [Metadata](#) / / Add

## Metadata

Test\_files

**Applies to**  
Test\_files ▼  
Metadata can be added at the SIP/AIP level only

**Title**  
Test files

**Creator**  
Clancy King

**Subject**

**Description**

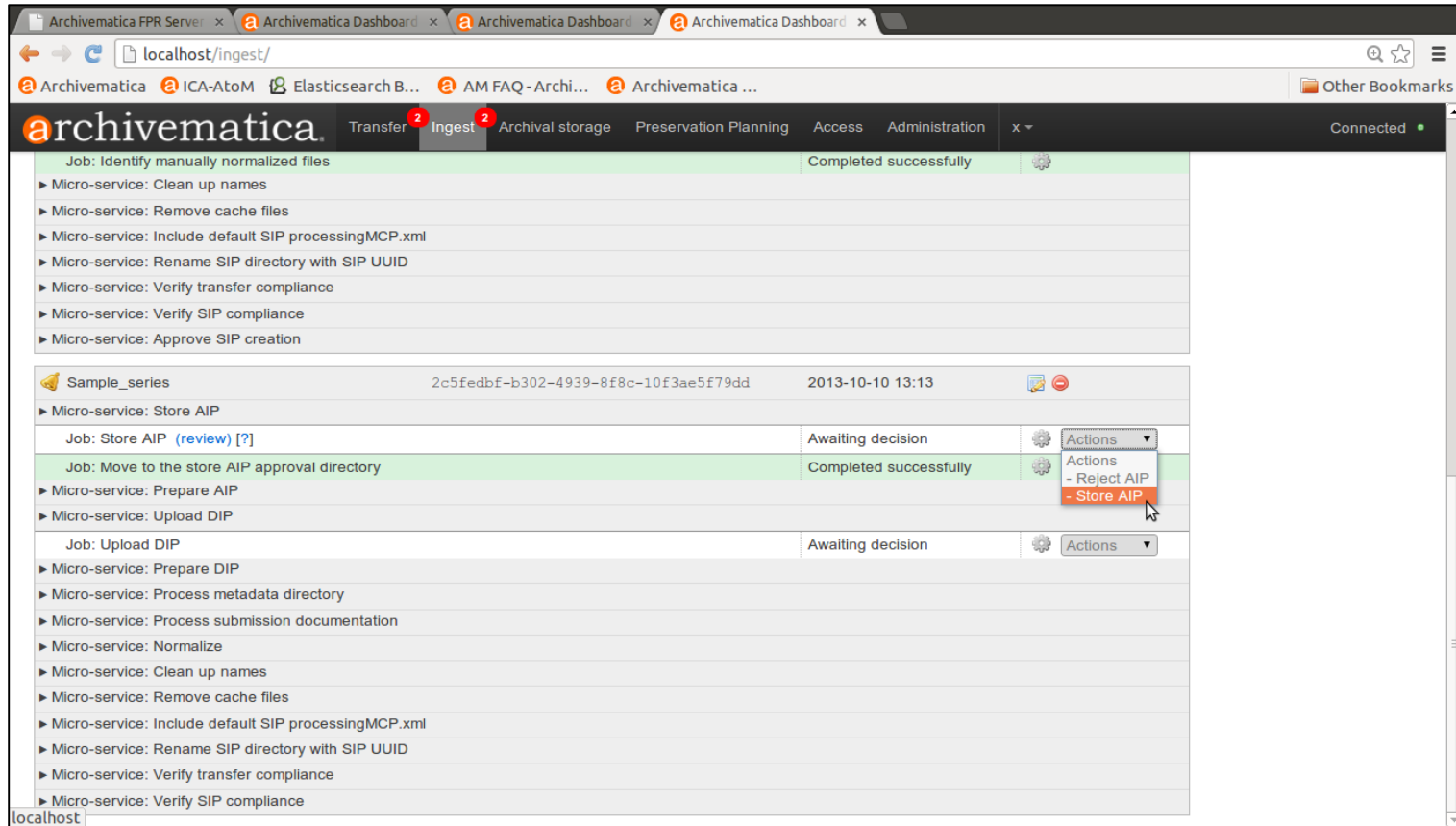
**Publisher**

**Contributor**

**Date**  
2012/04/05  
Use ISO 8061 (YYYY-MM-DD or YYYY-MM-DD/YYYY-MM-DD)

A point or period of time associated with an event in the lifecycle of an object. (ISO15826)

# Archivematica: Add AIP to Storage



The screenshot shows the Archivematica web interface with the 'Ingest' tab selected. The interface displays a list of jobs and their status. The 'Store AIP' job is highlighted, and the 'Actions' menu is open, showing options to 'Reject AIP' and 'Store AIP'.

Job	Status	Actions
Job: Identify manually normalized files	Completed successfully	
Micro-service: Clean up names		
Micro-service: Remove cache files		
Micro-service: Include default SIP processingMCP.xml		
Micro-service: Rename SIP directory with SIP UUID		
Micro-service: Verify transfer compliance		
Micro-service: Verify SIP compliance		
Micro-service: Approve SIP creation		
Sample_series	2c5fedbf-b302-4939-8f8c-10f3ae5f79dd	2013-10-10 13:13
Micro-service: Store AIP		
Job: Store AIP (review) [?]	Awaiting decision	Actions
Job: Move to the store AIP approval directory	Completed successfully	
Micro-service: Prepare AIP		
Micro-service: Upload DIP		
Job: Upload DIP	Awaiting decision	Actions
Micro-service: Prepare DIP		
Micro-service: Process metadata directory		
Micro-service: Process submission documentation		
Micro-service: Normalize		
Micro-service: Clean up names		
Micro-service: Remove cache files		
Micro-service: Include default SIP processingMCP.xml		
Micro-service: Rename SIP directory with SIP UUID		
Micro-service: Verify transfer compliance		
Micro-service: Verify SIP compliance		

# Back-end/Preservation: DuraCloud

Digital POWRR Tool Evaluation Grid	Ingest					Processing					Access		Storage				Maintenance			Other				
	Copy	Fixity Check	Virus Scan	File Dedupe	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
**DuraCloud	X	X		X	X	X	X	X	X			X			X	X	X	X		X	X	X	X	Varies

# Back-end/Preservation: DuraCloud

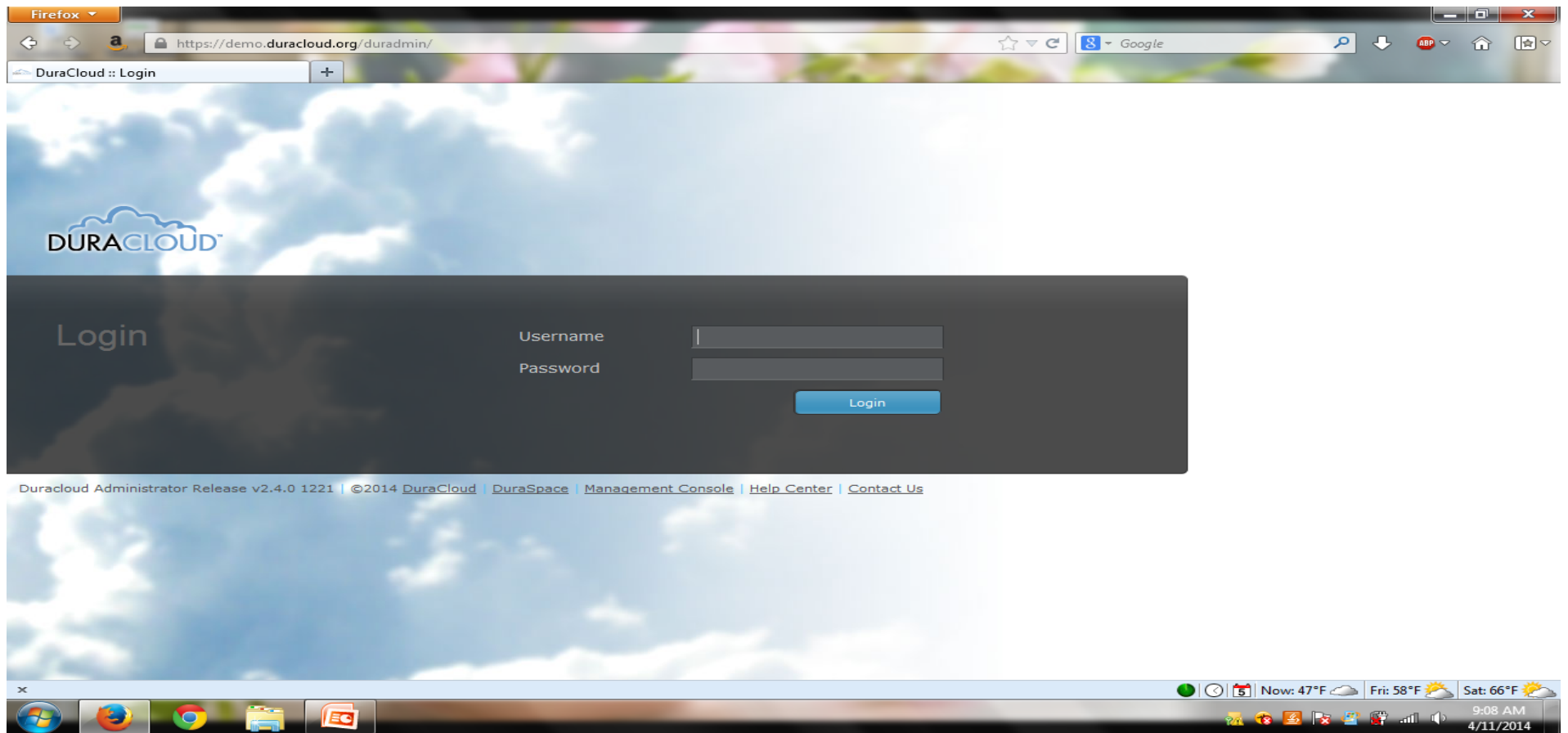
- Nonprofit; Open Pricing; Community buy-in
- Cloud storage/preservation solution
- Different storage provider options
- Hosted service (requires little to no IT support on your end!)
- Some microservices available (like health checks that verify checksums)
- Different options/methods for uploading content (bulk, single item, etc.)
- Intuitive uploads and file management
- Easy exit strategy
- Easy integration with DSpace
- New: Integrated with hosted version of Dspace
- Media streaming based on Amazon's Cloud service
- Responsive customer service with very good documentation
- Affordable; Scalable; Easy to get started

# DuraCloud.org

Head to the website for...

- Open Pricing
- Free Trial
- Lots of webinars and tutorials
- Learn more about the new DSpace Direct... a hosted version of the DSpace Institutional Repository software that is integrated with DuraCloud for preservation

<b><u>DuraCloud Preservation</u></b> The DuraCloud Preservation plan is ideal for institutions that wish to store one copy of their content in the cloud. <i>Subscription plan is available with storage between 1-5TB of content.</i> Example use case: <a href="#">Back-up preservation storage for a small amount of content</a>	<ul style="list-style-type: none"><li>◦ <a href="#">Standard features</a></li></ul>	(Storage in Amazon S3): <ul style="list-style-type: none"><li>▪ \$1,875 (subscription which includes 1TB storage)</li><li>▪ \$700 for additional TBs</li></ul>
<b><u>DuraCloud Preservation Plus</u></b> The DuraCloud Preservation Plus plan is best suited for organizations that wish to store two copies of their content in the cloud. <i>Subscription plan is available with storage between 1-5TB of content.</i> Example use case: <a href="#">Archival storage for a moderate amount of content</a>	<ul style="list-style-type: none"><li>◦ <a href="#">Standard features</a></li><li>◦ <a href="#">Automatic synchronization of content between primary and secondary storage providers</a></li><li>◦ <a href="#">Choice of secondary cloud storage providers</a></li><li>◦ <a href="#">Automatic file recovery between copies</a></li></ul>	(Storage in Amazon S3 + Amazon Glacier): <ul style="list-style-type: none"><li>▪ \$2,000 (subscription which includes 1TB storage)</li><li>▪ \$825 for additional TBs</li></ul> (Storage in Amazon S3 + SDSC): <ul style="list-style-type: none"><li>▪ \$2,875 (subscription which includes 1TB storage)</li><li>▪ \$1,400 for additional TBs</li></ul>
<b><u>DuraCloud Enterprise</u></b> The DuraCloud Enterprise plan is designed to meet the needs of institutions that wish to store one copy of their content in the cloud and need to provide a variety of individuals, departments, research groups, etc. access to a single DuraCloud account. <i>Subscription plan is available with unlimited storage. Contact us for custom quote for storage beyond 10TB.</i> Example use case: <a href="#">Long-term access storage for a variety of institutional content</a>	<ul style="list-style-type: none"><li>◦ <a href="#">Standard features</a></li><li>◦ <a href="#">Media serving</a></li><li>◦ <a href="#">Account management</a></li><li>◦ <a href="#">Sub-account creation</a></li><li>◦ <a href="#">Permissions and access controls</a></li><li>◦ <a href="#">User management</a></li><li>◦ <a href="#">Coming Soon: Shibboleth authentication -- available to Internet2 and InCommon members</a></li></ul>	(Storage in Amazon S3): <ul style="list-style-type: none"><li>▪ \$5,750 (subscription which includes 1TB storage)</li><li>▪ \$500 for additional TBs</li></ul>
<b><u>DuraCloud Enterprise Plus</u></b> The DuraCloud Enterprise Plus plan is intended to assist organizations that wish to store two copies of their content in the cloud and need to provide a variety of individuals, departments, research groups, etc. access to a single DuraCloud account. <i>Subscription plan is available with unlimited storage. Contact us for custom quote for storage beyond 10TB.</i> Example use case: <a href="#">Long-term access storage for a variety of institutional content</a>	<ul style="list-style-type: none"><li>◦ <a href="#">Standard features</a></li><li>◦ <a href="#">Automatic synchronization of content between primary and secondary storage providers</a></li><li>◦ <a href="#">Choice of secondary cloud storage providers</a></li></ul>	(Storage in Amazon S3 + Amazon Glacier): <ul style="list-style-type: none"><li>▪ \$5,875 (subscription which includes 1TB storage)</li><li>▪ \$625 for additional TBs</li></ul>





Firefox

localhost:8888/sync/status

DuraCloud Sync

DURACLOUD SYNC TOOL

StatusConfiguration

Overview

StopStart

Running

Sync Started

Fri Apr 11 09:04:41 EDT 2014

Queue Size

13

Error Count

0

Active Syncs

Download History

There are no active uploads at this time.

Recent Activity

Queued for Synchronization (13)Errors (0)

File Path	Size	Last Modified Date
C:\Users\Carissa\Desktop\Puppies\Boston_Terriers\bucketofpups.jpg	30.1 KB	04/04/2014 11:34 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boston_Terriers\headnodpup.jpg	45 KB	04/04/2014 11:34 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boston_Terriers\threepups.jpg	121.8 KB	04/04/2014 11:35 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boston_Terriers\tinypup.jpg	13.3 KB	04/04/2014 11:34 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boxers\benchofpups.jpg	128.5 KB	04/04/2014 11:36 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boxers\bigbucketofpups.jpg	68.2 KB	04/04/2014 11:35 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boxers\siblings.jpg	103.5 KB	04/04/2014 11:36 AM EDT

Now: 47°FFri: 58°FSat: 66°F

9:04 AM4/11/2014

Firefox

localhost:8888/sync/status

DuraCloud Sync

DURACLOUD SYNC TOOL

StatusConfiguration

Overview

StopStart

Running

Sync Started

Fri Apr 11 09:04:41 EDT 2014

Queue Size

6

Error Count

0

Active Syncs

Download History

0% of 0.01 MBs

tinypup.jpg

0% of 0.13 MBs

benchofpups.jpg

0% of 0.12 MBs

threepups.jpg

Recent Activity

File (hover for full path)	Action	Size	Duration	Completed
threepups.jpg	Added	121.8 KB	17 secs	04/11/14 09:05 AM
headnodpup.jpg	Added	45 KB	17 secs	04/11/14 09:05 AM
bucketofpups.jpg	Added	30.1 KB	16 secs	04/11/14 09:05 AM

Queued for Synchronization (6)Errors (0)

File Path	Size	Last Modified Date
C:\Users\Carissa\Desktop\Puppies\Pugs\blackandfawn.jpg	29.2 KB	04/04/2014 11:38 AM EDT
C:\Users\Carissa\Desktop\Puppies\Pugs\onthegrass.jpeg	10.6 KB	04/04/2014 11:40 AM EDT
C:\Users\Carissa\Desktop\Puppies\Pugs\snuggling.jpeg	10.4 KB	04/04/2014 11:41 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boxers\bigbucketofpups.jpg	68.2 KB	04/04/2014 11:35 AM EDT
C:\Users\Carissa\Desktop\Puppies\Boxers\siblings.jpg	103.5 KB	04/04/2014 11:36 AM EDT
C:\Users\Carissa\Desktop\Puppies\French_Bulldogs\blackpup.jpeg	6.5 KB	04/04/2014 11:37 AM EDT

Now: 47°FFri: 58°FSat: 66°F

9:05 AM4/11/2014

Firefox

https://demo.duracloud.org/duradmin/spaces/sm/38/carissa-images

Google

DuraCloud

Getting Started Help Logout

ctest

powered by amazon web services

Spaces

filter

☒ carissa-images

☐ carissa-video-test

Content Items

Showing 1 - 13 of 13

Refresh Upload

type prefix

☐ Boston\_Terriers/bucketofpups.jpg

☐ Boston\_Terriers/headnodpup.jpg

☐ Boston\_Terriers/threepups.jpg

☐ Boston\_Terriers/tinypup.jpg

☐ Boxers/benchofpups.jpg

☐ Boxers/bigbucketofpups.jpg

☐ Boxers/siblings.jpg

☐ French\_Bulldogs/blackpup.jpeg

☐ French\_Bulldogs/onabed.jpg

☐ French\_Bulldogs/threepups.jpg

☐ Pugs/blackandfawn.jpg

☐ Pugs/onthegrass.jpeg

☐ Pugs/snuggling.jpeg

Space Detail

carissa-images

Provider: Amazon S3 SDSC Rackspace Amazon Glacier

Details

Items 13

Created 2010-11-22

Last Health Check Sat Mar 15 01:55:29 UTC 2014 - success [report](#)

Recount

History

Cumulative Byte and File Counts Over Time

45.0 MB

40.0 MB

35.0 MB

30.0 MB

25.0 MB

14 files

12 files

10 files

8 files

6 files

4 files

2 files

0 files

Duracloud Administrator Release v2.4.0 1221

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DURASPACE

Now: 47°F

Fri: 58°F

Sat: 66°F

9:11 AM


4/11/2014

Firefox


https://demo.duracloud.org/duradmin/spaces/sm/38/carissa-images/Boston\_Terriers/bucketofpups.jpg

Google

DuraCloud



ctest  
[Getting Started](#) [Help](#) [Logout](#)

 powered by amazon web services

Provider: Amazon S3

Spaces


☒ carissa-images  
☐ carissa-video-test

Content Items

Showing 1 - 13 of 13

☒ Boston\_Terriers/bucketofpups.jpg  
☐ Boston\_Terriers/headnodpup.jpg  
☐ Boston\_Terriers/threepups.jpg  
☐ Boston\_Terriers/tinypup.jpg  
☐ Boxers/benchofpups.jpg  
☐ Boxers/bigbucketofpups.jpg  
☐ Boxers/siblings.jpg  
☐ French\_Bulldogs/blackpup.jpeg  
☐ French\_Bulldogs/onabed.jpg  
☐ French\_Bulldogs/threepups.jpg  
☐ Pugs/blackandfawn.jpg  
☐ Pugs/onthegrass.jpeg  
☐ Pugs/snuggling.jpeg

Content Detail

 Mime Type: image/jpeg

Edit

Copy

Download

View

Delete

Space

carissa-images

Size

30.8 KB

Modified

2014-04-11T13:05:00

Checksum

397d8708cfb1062836e0d3e4a4379a67

Properties

creator

ctest

content-file-last-accessed

2014-04-04T11:34:54.054

content-file-path

C:\Users\Carissa\Desktop\Puppies\Boston\_Terriers\bucketofpups.jpg


content-file-modified

2014-04-04T11:34:54.054

content-file-created

2014-04-04T11:34:54.054

Duracloud Administrator Release v2.4.0 1221 | ©2014 [DuraCloud](#) | [DuraSpace](#) | [Management Console](#) | [Help Center](#) | [Contact Us](#)



Now: 47°F

Fri: 58°F

Sat: 66°F

9:10 AM

4/11/2014

# Back-end/Preservation: MetaArchive

Digital POWRR Tool Evaluation Grid	Ingest				Processing					Access		Storage					Maintenance			Other				
	Copy	Fixity Check	Virus Scan	File Dedupe	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
**MetaArchive (A private LOCKSS Network)	X	X		X	X			X		X	X			X	X	X	X	X		X	X		X	Varies

## Back-end/Preservation: MetaArchive

- Nonprofit; Open Pricing
- Instant community in the Cooperative!
  - All the cool kids are doing it!
- Helpful and responsive customer service
- Private LOCKSS network
- Dark Archive
- Requires dedicated IT administration
- Most memberships require attending meetings
- Assumes pre-processing work is done
- Rules for minimum processing requirements (ie file naming conventions)

What we tested

### Sample costs

<http://www.metaarchive.org/costs>

If an institution wanted to preserve 2 TB of content with us, they would pay:

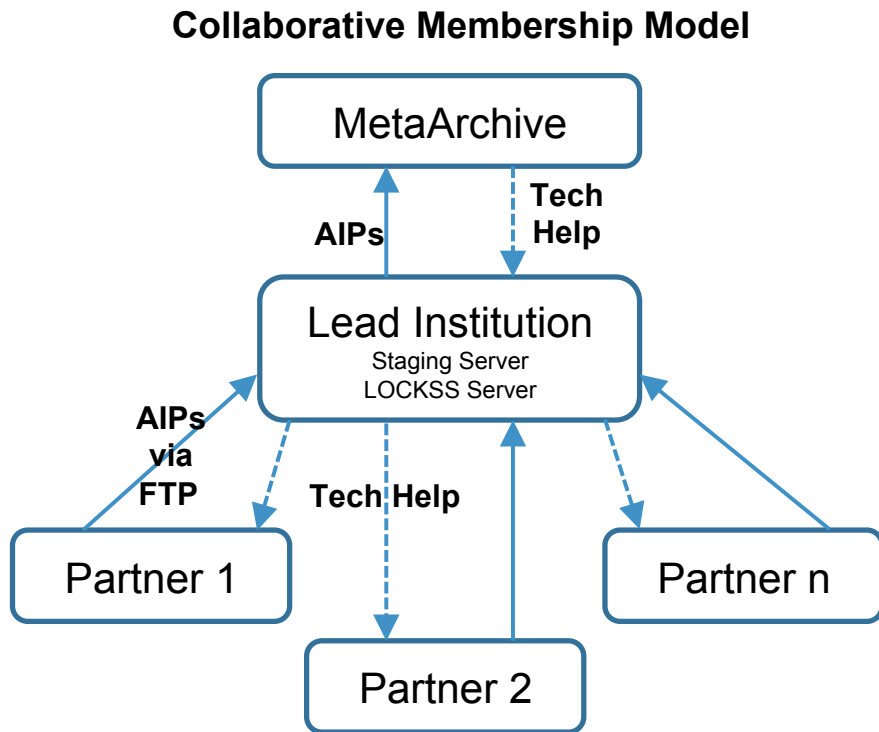
**Sustaining Member:** [\$5,500 (membership) + \$2,000 (space) x 3 years] + \$4,600 (server) = \$27,100/3 years, or \$9,033/year

**Preservation Member:** [\$3,000 (membership) + \$2,000 (space) x 3 years] + \$4,600 (server) = \$19,600/3 years, or \$6,533/year

**Collaborative Member (mock example comprised of 20 institutions):** [\$4,000 (membership) + \$2,000 (space) x 3 years] + \$4,600 (server) = \$22,600/3 years or \$7,533/year total or \$377.00/year per member

# Back-end/Preservation: MetaArchive

## Very simplified version of how it works:



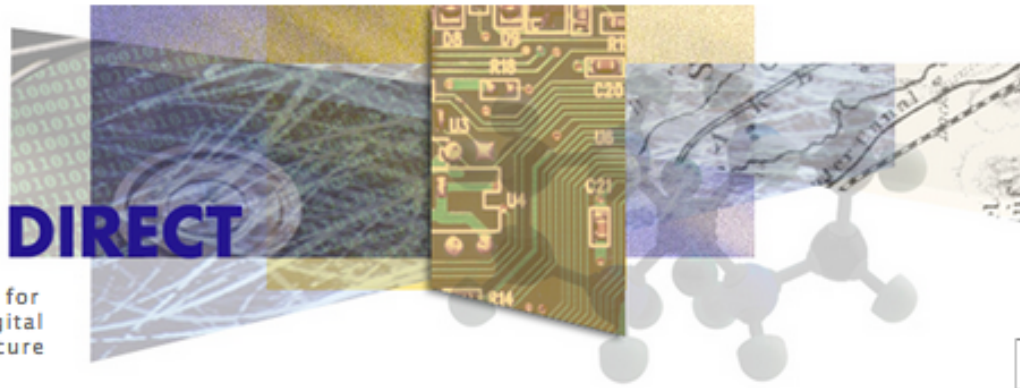
- 1) Partners prepare their content for preservation and package it.  
→ We used the BagIt specification, and Bagger helped us with this
- 2) Lead Institution prepares a staging server, sets appropriate access protocols and assists Partners with technical help.
- 3) Partners FTP their AIP's (Bags) to the staging server at the Lead Institution.  
→ We used Filezilla
- 4) MetaArchive harvests the AIP's from the Lead Institution's staging server and pushes it into their LOCKSS network.

**One other thing:** The Lead Institution also has a dedicated server that runs the LOCKSS software, is hooked into the MetaArchive network of servers across the globe, and is actively preserving the content of other Members.

**Archivematica (Front end)**  
**+**  
**DuraCloud (Back end)**  
**=**

**@archivesDIRECT**

The hosted solution for  
standards-based digital  
preservation and secure  
long-term storage.



[



## SUBSCRIPTION PLANS

The following subscription plans are available for the ArchivesDirect service. If you wish to receive a quote or have any questions about the ArchivesDirect subscription plan options, features, or prices, please [contact us](#).

In addition to the subscription plans below, there are optional ArchivesDirect [add-on packages](#) available.

Subscribe

Subscription Plan	Features	Annual Price
<b><a href="#">ArchivesDirect Standard</a></b> The ArchivesDirect standard plan is ideal for institutions with diverse digitized and born-digital holdings, including images, text files, office documents, PDF files, audio and video files, and forensic disk images. Users of this service will have access to a robust suite of digital preservation functions via a hosted instance of Archivemata. Archivemata is well known for its ability to produce highly standardized and interoperable Archival Information Packages (AIPs). AIP storage will be DuraCloud with secure, replicated storage in Amazon S3 and Amazon Glacier.	<a href="#">One Annual Hosted Archivemata Instance</a> <a href="#">Annual Storage: 1 TB</a> <a href="#">One Training Session</a> <a href="#">Six Hours of Customized Training and Consulting</a>	\$11,900
<b><a href="#">ArchivesDirect Digital Preservation Assessment</a></b> This plan is ideal for institutions just starting out with digital preservation or considering multiple preservation solutions. Use this service as an opportunity to learn more about digital preservation using Archivemata, to assess your readiness for digital preservation, and to plan your preservation workflows. Finish the three-month period with institution-specific use cases, workflow plans and sample Archival Information Packages (AIPs).	<a href="#">One Three-Month Hosted Archivemata Instance</a> <a href="#">One Training Session</a> <a href="#">Ten Hours of Customized Training and Consulting</a> <a href="#">Three-Month Storage: 250 GB</a>	\$4,500

# Front-end & Back-end: Preservica






Digital POWRR Tool Evaluation Grid	Ingest					Processing					Access		Storage					Maintenance			Other			
	Copy	Fixity Check	Virus Scan	File Dedupe	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
Preservica(Tessella)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Varies

# Front-end & Back-end: Preservica

- All encompassing:
  - Ingest
  - Processing
  - End-User Access
  - Preservation
  - Migration
- Aligned with OAIS reference model
- Hosted Service (Requires little IT support on your end)
- Very user friendly
- Intuitive workflows
- Exit strategy available (batch export)
- Ability to harvest via web crawls
- Solid customer support
- Different training options available for institutions with smaller budgets
- Currently uses only Amazon cloud storage
  - new options forthcoming
- Proprietary, vendor-based
- E-mail Preservation

Starter	<b>up to 250 GB</b> includes training, support & user group	<b>\$3,950 per year</b> in Amazon S3
Starter Plus	<b>up to 500 GB</b> includes training, support & user group	<b>\$6,950 per year</b> in Amazon S3
Standard	<b>1 to 10 TB</b> includes training, support & user group	<b>\$11,950 per year</b> for first TB in Amazon S3 then \$1,450 per TB S3 per year and/or \$550 per TB Glacier per year
Volume	<b>10 TB+</b> includes training, support & user group	<b>\$ Discounted Plans (up to 50%)</b> in Amazon S3 and/or Amazon Glacier

### All plans include the following:

- ✓ One day in depth training on our user webinars
- ✓ Active user group with regular meetings and community portal
- ✓ Unlimited support by email
- ✓ Professional software maintenance and regular new feature upgrades
- ✓ Fully integrated suite of easy-to-use OAIS conforming workflows
- ✓  Public access/discovery module
- ✓ Active Preservation technology
- ✓ Automated DSpace ingest
- ✓  Automated CONTENTdm ingest
- ✓  Automated Microsoft SharePoint ingest
- ✓  Automated Microsoft Outlook ingest
- ✓ Advanced Website Harvesting
- ✓ CALM catalogue synchronization
- ✓  Large file upload agent
- ✓ Linked Data Registries
- ✓ All hosting, backup and operations
- ✓ Metadata held in fast Amazon RDS storage
- ✓ Durable Cloud storage – multiple copies, multiple locations, integrity checking
- ✓ Choice of Amazon S3 and/or Amazon Glacier (above 1 TB) for optimal storage costs
- ✓ Copy back to local server option
- ✓ No penalty upgrades to higher plans
- ✓ No cost to retrieve content if you decide to leave the service



# INGEST

StartWaitingRunningCompletedReportsManage

Workflow Details

Workflow Context	Discovery Package Ingest ...
Workflow Definition	Ingest Workflow (Manual Selection)
Workflow ID	474
Workflow State	Completed
Date Started	05.02.14 10:30:19
Date Finished	10.03.14 15:43:32
Number of Files	31
Total Size	14 MB
Collection Code	RC278
Submission name	RC 278 Kishwaukee Kiwanis
Top Level Record	RC 278 Kishwaukee Kiwanis

Back

Step Progress

State	Name	Progress	Started	Finished	Messages
-------	------	----------	---------	----------	----------

<b>Collection Code</b>	RC 315
<b>Submission name</b>	RC 315 League of Women Voters of the Rochelle Area
<b>Top Level Record</b>	RC 315 League of Women Voters of the Rochelle Area

[Back](#)

### Step Progress

State	Name	Progress	Started	Finished	Messages
✓	Import from Transfer Area	<div></div>	07.03.14 14:33:09	07.03.14 14:33:14	
✓	Virus Check	<div></div>	07.03.14 14:33:14	07.03.14 14:33:47	
✓	Fixity Check	<div></div>	07.03.14 14:33:47	07.03.14 14:33:50	
✓	Metadata Integrity	<div></div>	07.03.14 14:33:50	07.03.14 14:33:53	
✓	Content Integrity	<div></div>	07.03.14 14:33:53	07.03.14 14:33:56	
✓	SIP Validation	<div></div>	07.03.14 14:33:56	07.03.14 14:33:59	
✓	SIP Validation with Database Crosscheck	<div></div>	07.03.14 14:33:59	07.03.14 14:34:02	
✓	Characterise	<div></div>	07.03.14 14:34:02	07.03.14 14:34:17	<a href="#">View</a>
✗	Store Files	<div></div>	07.03.14 14:34:17	08.03.14 05:09:08	<a href="#">View</a>

## Preservation Plan Details

Transformation Name	9605ea1e-2959-4c0f-b6a1-73fd0b6aad97
Description	Test1
Date Created	
Number Of File Sets	1
Migration Pathway Role	Preservation
Usage	Test
Top-Level Collection	Danielle

Exit

Terminate

This transformation is ready for execution.

### Selected File Sets

	Collection Title	Catalogue Ref	Description	Manifestation	Number of Files	Files at Risk	Size	Size of Files at Risk	Details
	Danielle	RC 278 Kishwaukee Kiwanis	RC 278 Kishwaukee Kiwanis	1	31	2	15.41 MB	592.03 kB	<a href="#">Details</a>
Totals	1				31	2	15.41 MB	592.03 kB	

### Selected Migration Pathways

Source Format	Version	PUID	Target Format	Version	PUID	Tool
Microsoft Word for Windows	2007 onwards	fmt/412	Acrobat PDF 1.4 - Portable Document Format	1.4	fmt/18	Open Office PDF

Back

Confirm



Start    Waiting    **Running**    Completed    Reports    Manage

### Workflow Details







Workflow Context	Migration (Filtered)
Workflow Definition	Preservation Workflow (Filter by Top-Level Collection)
Workflow ID	879
Workflow State	Active
Date Started	13.04.14 15:47:58
Date Finished	
Number Of File Sets	1
Migration Pathway Role	Preservation

Pause

Back



Terminate

### Step Progress

State	Name	Progress	Started	Finished	Messages
	New Details	<div></div>	13.04.14 15:47:58	13.04.14 15:53:39	
	Pick Formats at Risk	<div></div>	13.04.14 15:53:39	13.04.14 15:53:49	
	Pick Formats at Risk	<div></div>	13.04.14 15:53:49	13.04.14 15:55:52	
	Pick File Sets	<div></div>	13.04.14 15:55:52	13.04.14 15:58:50	
	Ready	<div></div>	13.04.14 15:58:50	13.04.14 15:59:58	
	Migrate AIPs	<div></div>	13.04.14 15:59:59		

[Back](#)

### Step Progress

State	Name	Progress	Started	Finished	Messages
	New Details	<div><div></div></div>	13.04.14 15:47:58	13.04.14 15:53:39	
	Pick Formats at Risk	<div><div></div></div>	13.04.14 15:53:39	13.04.14 15:53:49	
	Pick Formats at Risk	<div><div></div></div>	13.04.14 15:53:49	13.04.14 15:55:52	
	Pick File Sets	<div><div></div></div>	13.04.14 15:55:52	13.04.14 15:58:50	
	Ready	<div><div></div></div>	13.04.14 15:58:50	13.04.14 15:59:58	
	Migrate AIPs	<div><div></div></div>	13.04.14 15:59:59	13.04.14 16:01:07	<a href="#">View</a>

### Preservation Plan Details






Transformation Name	9605ea1e-2959-4c0f-b6a1-73fd0b6aad97
Description	Test1
Number Of File Sets	1
Migration Pathway Role	Preservation
Usage	Test

The transformation has completed.

Top Level Record	Collection Title	Outcome
RC 278 Kishwaukee Kiwanis	Danielle	Transformation Complete



## Saved Reports

Report Name	Report Summary	Download
Deleted manifestations	Show deleted redundant manifestations and associated files	<a href="#">Parameters</a>
Download activity	Download activity summary	<a href="#">Parameters</a>
File Download activity	File Download activity summary	<a href="#">Parameters</a>
File formats	Show the breakdown of file formats in the archive	  
File formats (details)	Shows the file formats with version and puid details	  
Files At Risk	Show deliverable units containing 'at risk' files in their active manifestation	<a href="#">Parameters</a>

Help Home English


Tools View Manifestation Preservation 1 (Active, Original)

Kish-Newslett... Kish-Newslett... Kish-Newslett... Kish-Newslett... Kish-Newslett... Kish-Newslett...

Kish-Newslett... Kish-Newslett... Kish-Newslett... Kish-Newslett... Kish-Newslett... Kish-Newslett...

Filter Apply ☒ Show accrued files ☐ Show children ☐ Show deprecate 1 of 2 1-20 of 31

Name: Kish-Newsletter-2013-09-25.doc  
File Type: Microsoft Word Document  
Type: File Size: 2.359 MB Reference: 17d420e1-0910-4887-a2e8-104e0bf9a338



## Search Our Archive

search



### FEATURED



## New Dorset Photo Collection

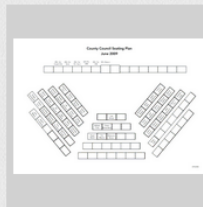
Please check out our new photo collection of donated photos from around the county supplied for free use. These photos have been provided by professional and amateur photographers and cover the period 1990-2002.

Object Type: Record  
In Collection: Dorset Archives

[details](#)

[view images](#)

## Other items of interest



### 2009 Council Seating

Council seating and processes

Object Type: File  
In Record: Public Documents



### Ancestry Documents

Collection of information supplied by Ancestry.com

Object Type: Record  
In Collection: Dorset Archives



### Dorset Strategic Partnership Annual Review

Audit & Scrutiny Committee : Dorset Strategic Partnership Annual Review and Use of Funding

Object Type: File  
In Record: Public Documents



### William Barnes Collection

William Barnes is best known for his dialect poetry, though his formal schooling ended at the age of 13. The collection at the Dorset History Centre contains most of his published works.

Object Type: Record  
In Collection: Dorset Archives

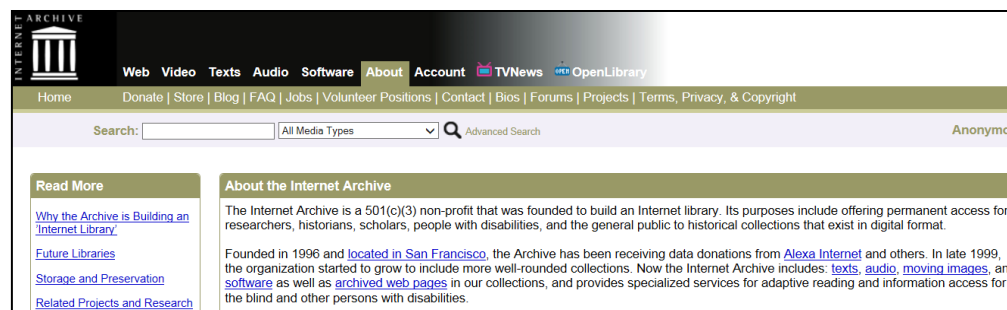
# Front-end & Back-end: Internet Archive

Digital POWRR Tool Evaluation Grid	Ingest				Processing				Access		Storage				Maintenance			Other						
	Copy	File Dedupe	Virus Scan	Fixity Check	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
		x	x		x	x	x	x	x		x	x	x	x	x	x	x					x		Free



# Internet Archive

- Only intended for materials in the public domain (available to everyone).
- Geographically distributed copies.
- No frills (and no charge!) service.



### Share your Files

Please contribute books, audio, and video files that you have the right to share. The Internet Archive, a non-profit library, will provide free storage and access to them. (We reserve the right to remove any submitted material.)

Upload Files

Or choose an alternate upload method:

Classic Uploader	Internet Explorer users and print disabled (prefer to <a href="#">not us</a> )
Live Music Archive	For etree items
FTP	Large file alternative

- Handles books best, but can accommodate manuscripts, audio, video, and images.
- Is especially suited for small (VERY small institutions with limited (or no) other alternatives.
- Does offer a more robust preservation product through its Archive-It service.

Account







TVNews

OpenLibrary

Forgot Password | Archive Bookmarks

Q Advanced Search

Hello Northern Illinois University Library (not you? sign out)

<div>Page Title *</div> <div>postelpopulism1</div> <div>✓</div>	<div>Drag and Drop More Files Here or <div>Select files to add</div></div> <table><thead><tr><th>Name</th><th>Size</th><th>x</th></tr></thead><tbody><tr><td> postelpopulism1.avi</td><td>1.9 GB</td><td></td></tr></tbody></table>	Name	Size	x	 postelpopulism1.avi	1.9 GB	
Name		Size	x				
 postelpopulism1.avi		1.9 GB					
<div>Page URL *</div> <div>http://archive.org/details/postelpopulism1</div> <div>✓</div>							
<div>Description *</div> <div>Add a description of the item page</div> <div>✓</div>							
<div>Subject Tags *</div> <div>Add keywords, separated by commas</div> <div>✓</div>							
<div>Creator</div> <div>Creator of the content</div> <div>✓</div>							
<div>Date</div> <div>Date work was created/published</div> <div>✓</div>							
<div>Collection *</div> <div>Community Video</div> <div>✓</div>							
<div>Test Item</div> <div>No</div> <div>✓</div>							
<div>Language</div> <div>Language of the work</div> <div>✓</div>							
<div>License</div> <div>No license selected</div> <div>✓</div>							
<div>More Options</div> <div><a href="#">Add additional metadata...</a></div>							

Upload and Create Your Item

[Please provide feedback about the new Beta Uploader](#) — [Instructions on how to preset metadata](#) — [Save this metadata](#)

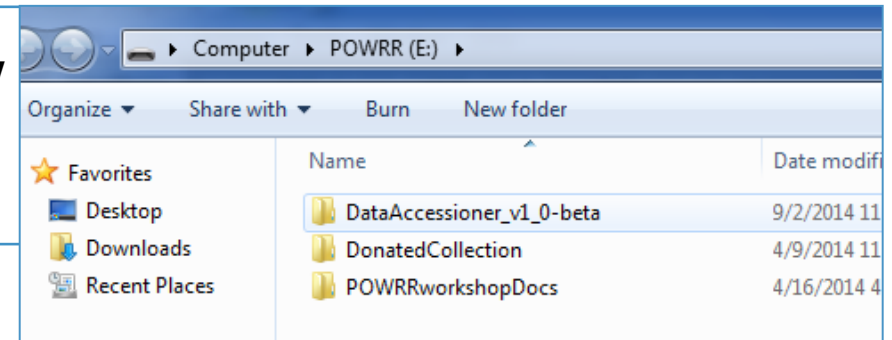


**LUNCH**

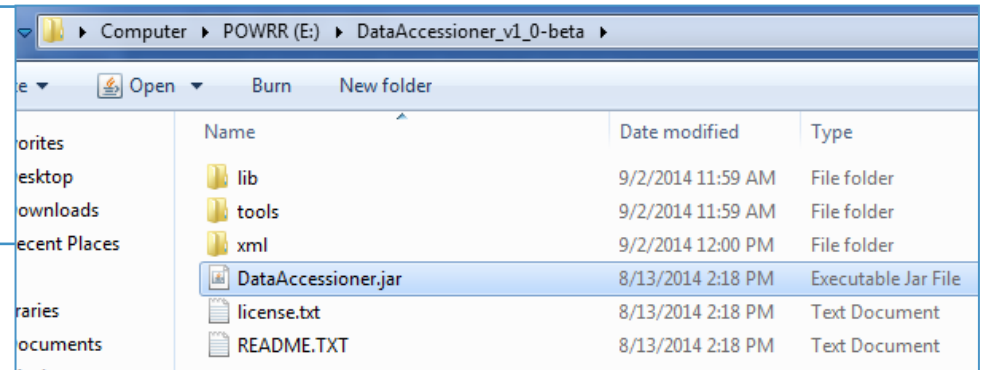
# Activity: Accessioning a Digital Collection 1 - 2pm

## 1. Insert flash drive and open the explorer window

Data Accessioner  
Donated Collection Folder  
Digital Collections Inventory file  
Other stuff.....

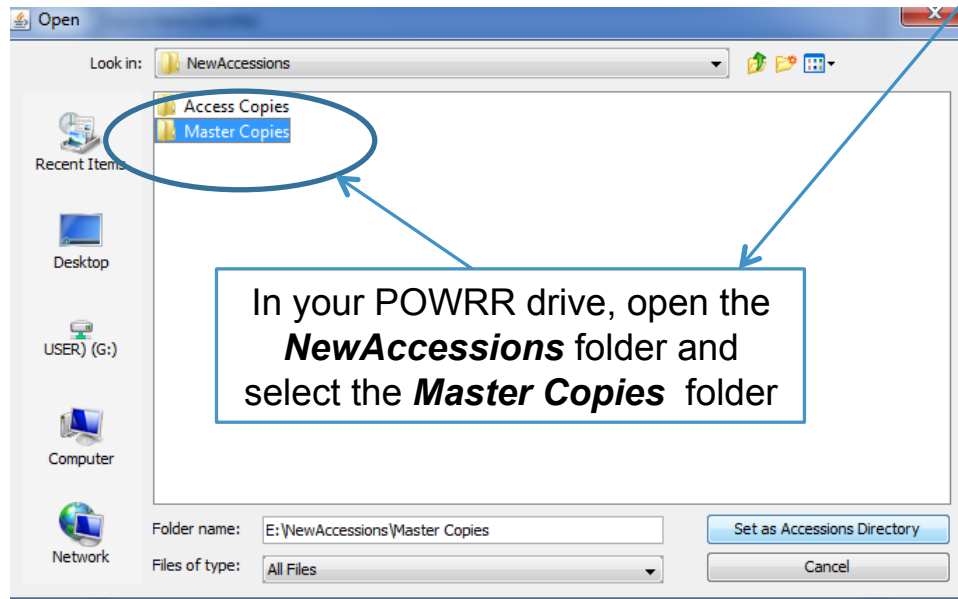


## 2. Navigate to DataAccessioner.jar and open it



# Create your accession directory:

Where you want the collection to go live  
*Preferably a stable media like your network drive*



DataAccessioner v. 1.0

File FITS Tools

Your Name: Victoria Huskie

Accession Number: 2015-04-24

Collection Title: A Digital Dog Collection

Accession to Directory

Source/Directory Exclude Include

Source Name/Identifier

File/Folder Dublin Core Metadata

Dublin Core Element: dc:contributor

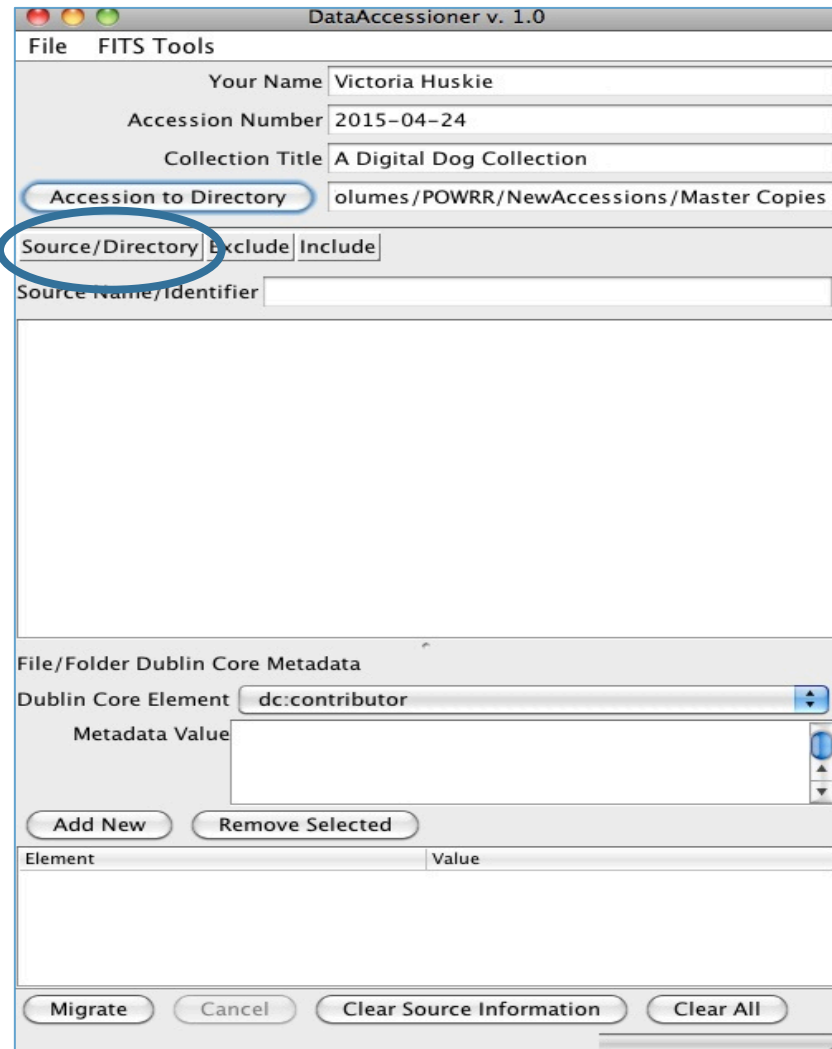
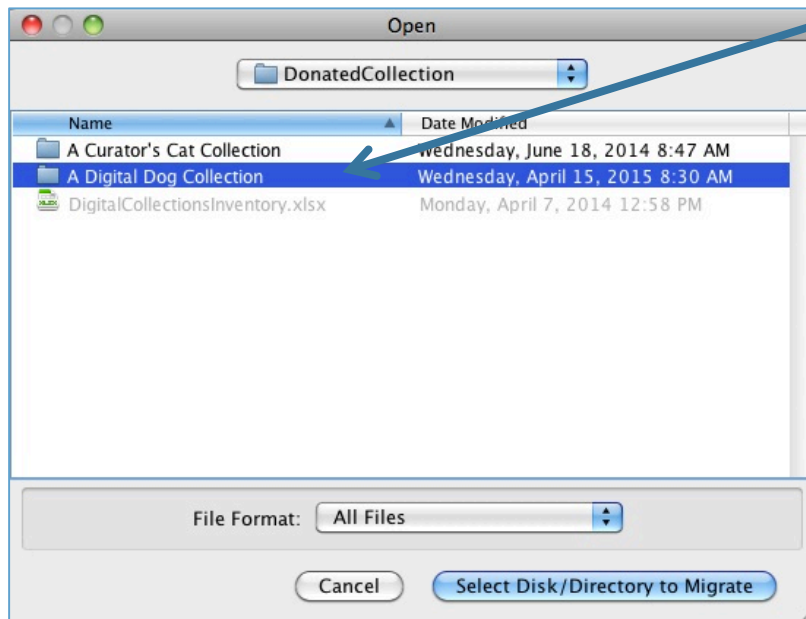
Metadata Value

Add New Remove Selected

Element	Value
---------	-------

Migrate Cancel Clear Source Information Clear All

**Select the collection  
you are accessioning**



## Populate descriptive metadata and migrate your collection

Select which element you want to add metadata to

Add the Dublin Core Metadata goes here

Hit the "Migrate" button to begin the migration process.

	Date	Si...
A Digital Dog Collection	Apr 15,...	163...
▶ Action Shots	Apr 15,...	163...
▶ Historical Dogs	Apr 15,...	163...
▶ Meme Potential	Apr 15,...	163...
▶ Puppies	Apr 15,...	163...

File/Folder Dublin Core Metadata

Dublin Core Element: dc:date

Metadata Value:

Add New Remove Selected

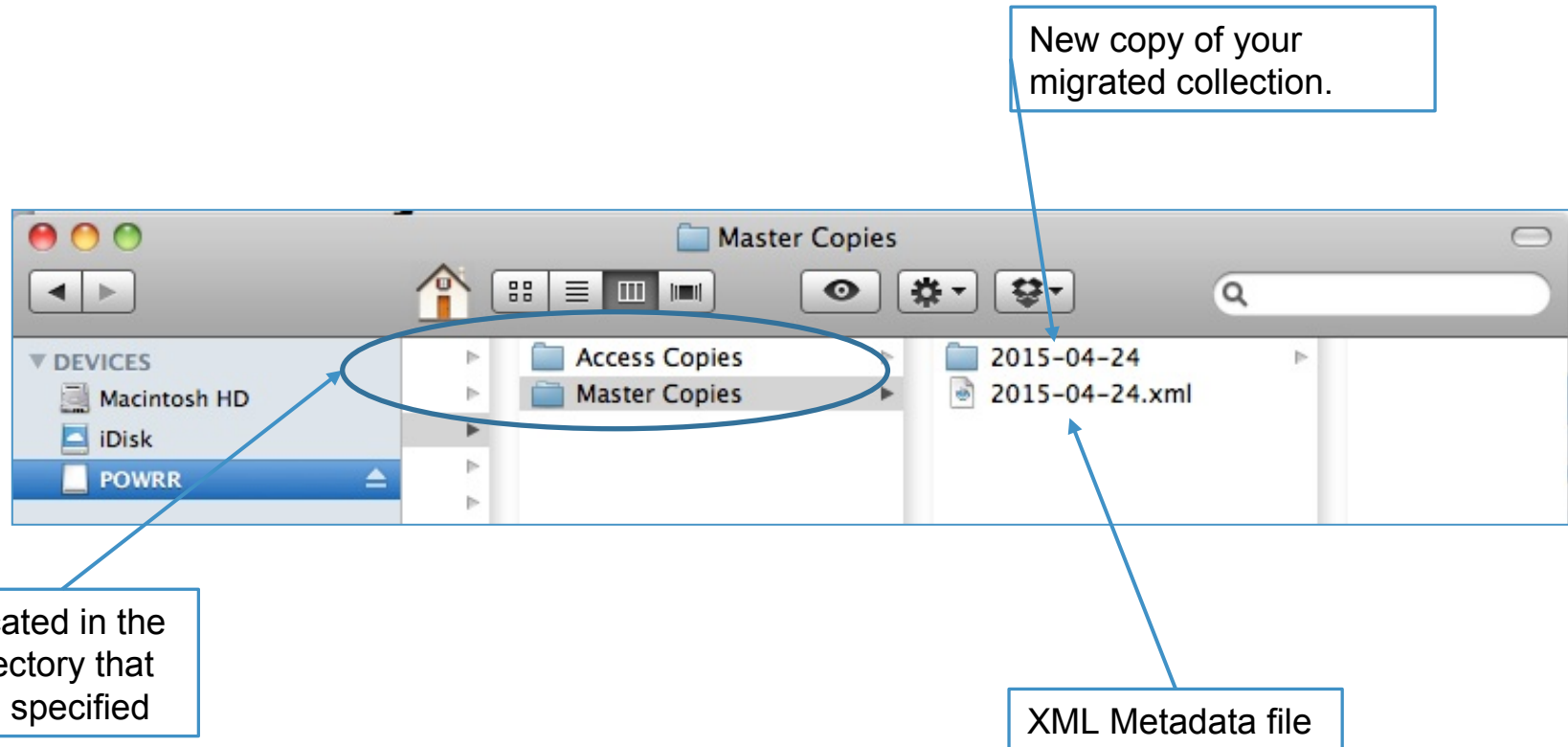
Element	Value
dc:creator	Jane and John Moneybags
dc:date	2015
dc:description	A collection of dog images collected by J...

Migrate Cancel Clear Source Information Clear All

Checksumming & copying: Better call a doctor whi.jpg

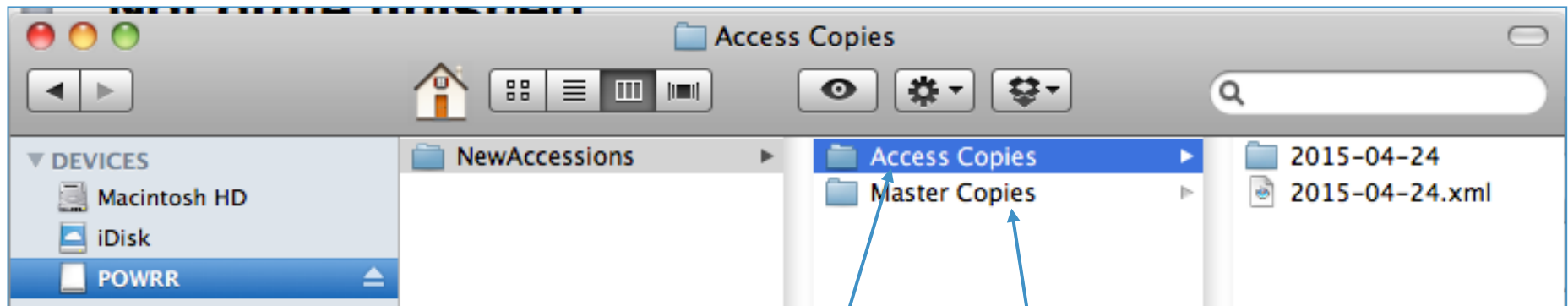
You will be able to see the progress bar move at the bottom.

# What did you create?



**You. Are. AWESOME.**

**Not quite finished...**



Make a copy of the Master, place in the Access Copies folder, and don't touch the Master Copy again unless a new derivative is needed or until you move it into a preservation system!!

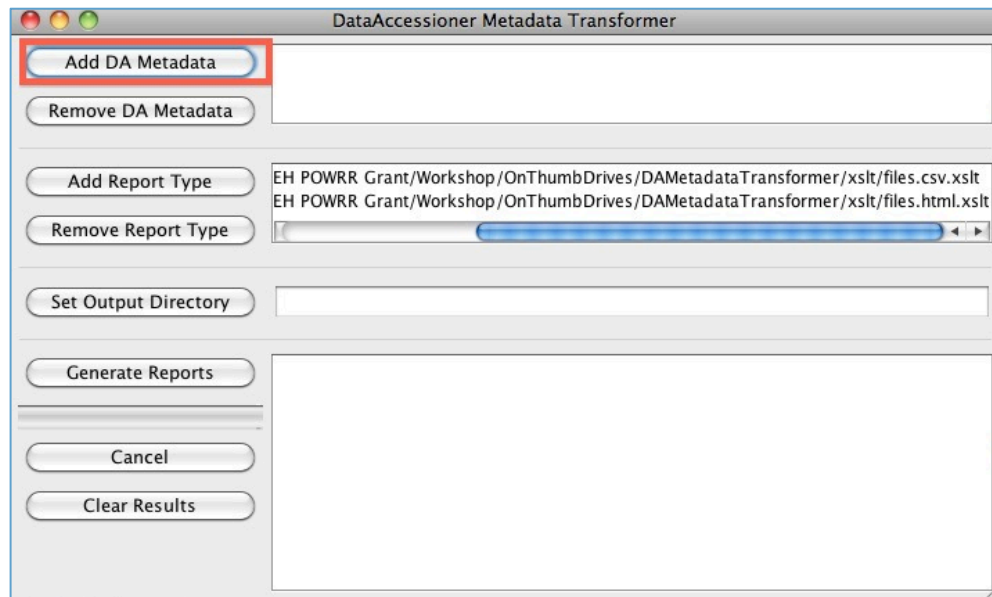
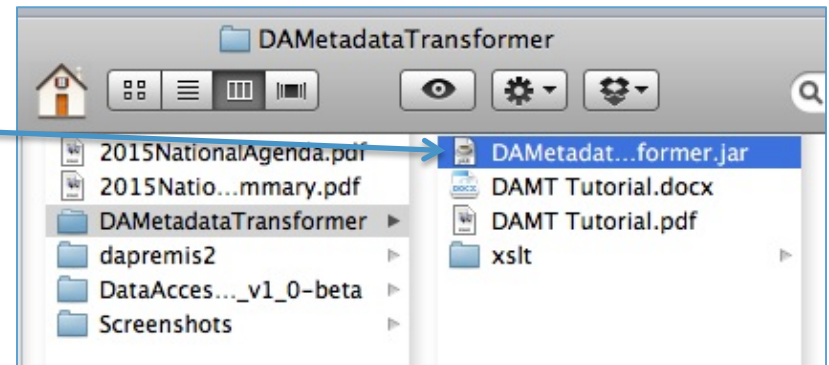
And finally...update your Inventory to reflect the location of the Access Copy. Note addition of XML file after processing.

DigitalCollectionsInventory_Dogs_After.xlsx						
New Open Save Print Import Copy Paste Format Undo Redo AutoSum Sort A-Z Sort Z-A Gallery Toolbox Zoom Help						
Category		Title & Description	Date	Location	Extent	Format
1	(locally defined; project name? content creation method?)	(Donor applied and/or yours... what's your local practice?)	(YYYYMMDD or other locally defined format for accession date)	(Storage place of choice -- networked server recommended)	(Quantity of folders, files, by type or total size)	(What extensions are involved: .jpg, .tif, .xls?)
2	Special Collections, mixed; digitized and born digital	A Digital Dog Collection. Donated by Jane (nee Pennypincher) and John Moneybags, Class of 2006. Various images and visual materials about dogs of interest to the donors; some material may have copyright restrictions by law	2015-04-24	C:\Users\User\Desktop\NewAccession\Masters	12.93 MB	19 jpgs; 1 ogg; 1 png; 1 xml file from DA
3	Special Collections, mixed; digitized and born digital	A Digital Dog Collection. Donated by Jane (nee Pennypincher) and John Moneybags, Class of 2006. Various images and visual materials about dogs of interest to the donors; some material may have copyright restrictions by law	2015-04-24_AccessCopies	C:\Users\User\Desktop\NewAccession\AccessCopies	12.93 MB	19 jpgs; 1 ogg; 1 png; 1 xml file from DA
4						
5						
6						
7						
8						
9						



# DA: Metadata Transformer

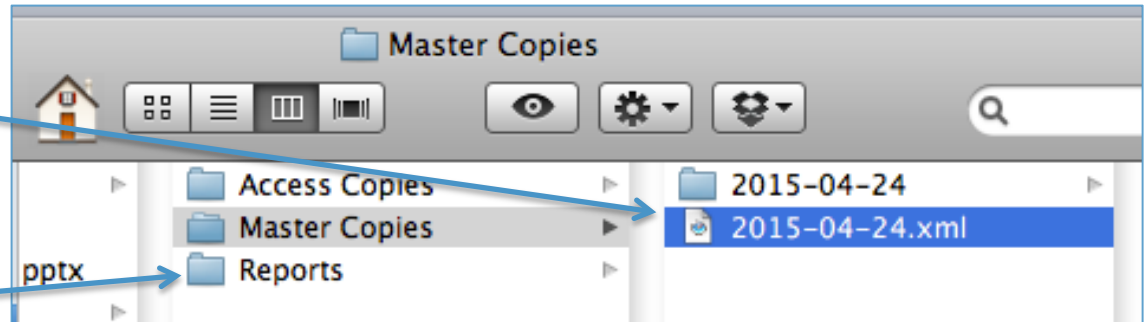
Navigate to DAMetadataTransformer.jar and open it



Click on "Add DA Metadata" button

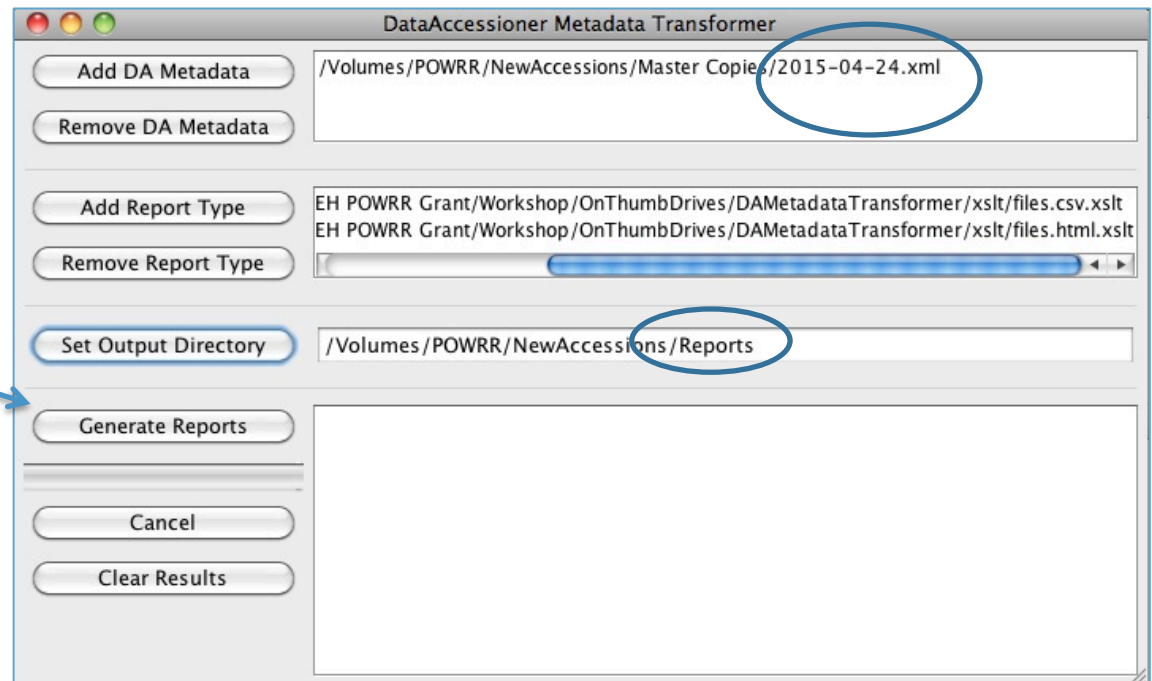
Navigate to the XML file you just created.

We also want a place where the new reports will go live. In this case, you can create a “Reports” folder



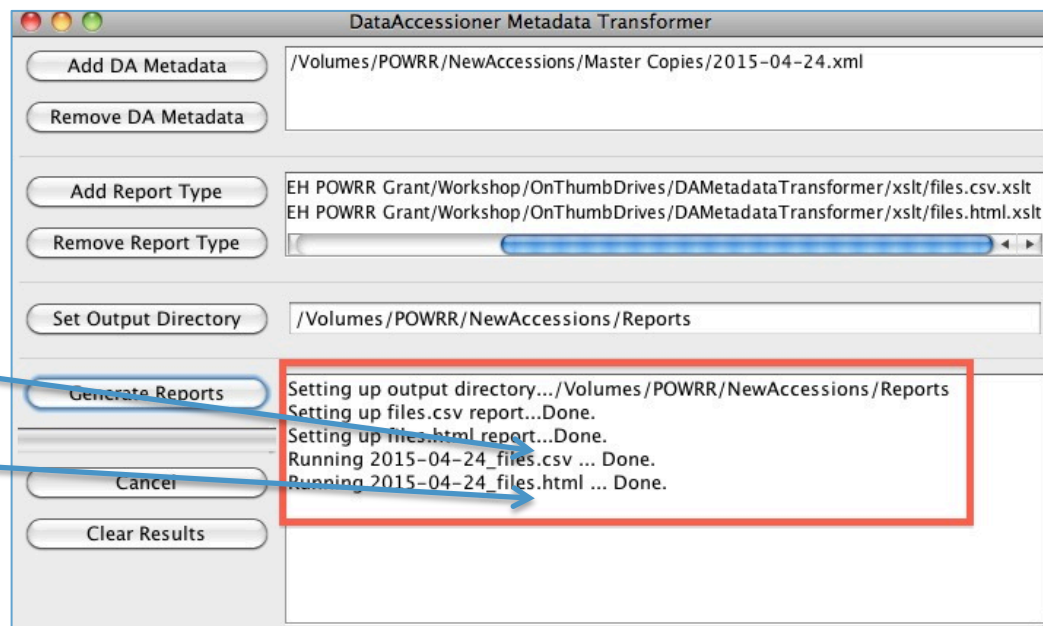
You will see the XML created and the folder where the new reports will go live.

Click on “Generate Reports”

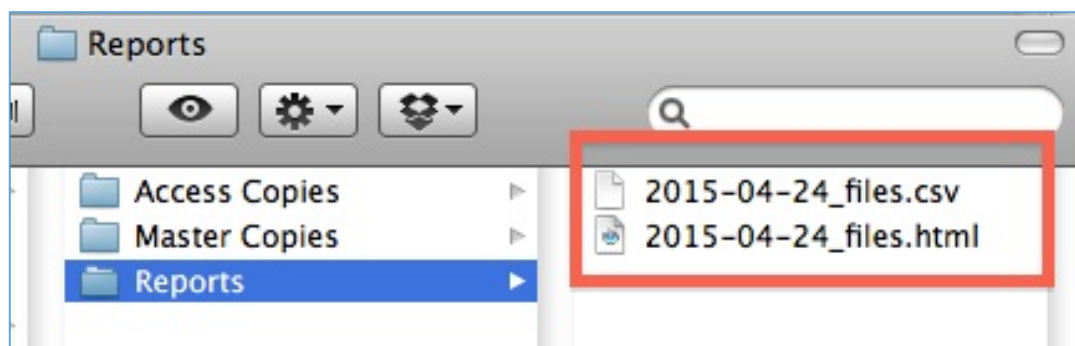


Once the reports have been generated, DA:MT will show the results.

In this case, two files were created: a CSV file and HTML file.



To view the files, navigate back to the "Reports" folder.



## CSV FILE

New Open Save Print Import Copy Paste Format Undo Redo AutoSum Sort A-Z Sort Z-A Gallery Toolbox Zoom Help									
<div> <div>Sheets</div> <div>Charts</div> <div>SmartArt Graphics</div> <div>WordArt</div> </div>									
	A	B	C	D	E	F	G		
1	directory path	file name	last modified	size (bytes)	md5	file format			
2	A Digital Dog Collection/Action Shots/	Catch_the_ball.jpg	2015-03-23T15:08:52.000	28095	e72655088fc84f685	JPEG File Interchange Format			
3	A Digital Dog Collection/Action Shots/	Dachshund_leaping_from_log.jpg	2015-03-23T15:02:21.000	1213250	8c42ff7cfa14dea90	Exchangeable Image File Format			
4	A Digital Dog Collection/Action Shots/	Play time.jpg	2015-03-23T14:51:31.000	1140632	fdbb12e0789c74e32	JPEG File Interchange Format			
5	A Digital Dog Collection/Historical Dogs/	All_Dressed_Up.jpg	2015-03-23T15:03:31.000	10466	3b87fd7a0982700e5	JPEG File Interchange Format			
6	A Digital Dog Collection/Historical Dogs/	Animal-Locomotion-Photo-Cat-and-dog-jumping-7	2015-03-23T14:59:42.000	142754	1d8b90918b7fd002c	JPEG File Interchange Format			
7	A Digital Dog Collection/Historical Dogs/	Better call a doctor whl.jpg	2015-03-23T15:22:24.000	64357	9e53d0749f7cbd60e	JPEG File Interchange Format			
8	A Digital Dog Collection/Historical Dogs/	Blizzards can be fun whl.jpg	2015-03-23T15:24:20.000	15265	507ae4998624c05f5	JPEG File Interchange Format			
9	A Digital Dog Collection/Historical Dogs/	Boxer_dog_footage_1901.ogg.160p.ogv	2015-03-23T14:45:13.000	1864745	78e5d16b897570e3	Ogg data, Skeleton v4.0			
10	A Digital Dog Collection/Historical Dogs/	Historic_Dogs.png	2015-03-23T15:05:57.000	1044189	e02c655f61554a09a	Portable Network Graphics			
11	A Digital Dog Collection/Historical Dogs/	Small dog on a pedestal.jpg	2015-03-23T15:26:56.000	16305	017ccfd735f58304d	JPEG File Interchange Format			
12	A Digital Dog Collection/Historical Dogs/	Tootsie takes up music whl.jpg	2015-03-23T15:23:35.000	61558	d6729ecbf3f97941d	JPEG File Interchange Format			
13	A Digital Dog Collection/Meme Potential/	A-Corgie-floating-along_(2509104391).jpg	2015-03-23T14:53:03.000	154062	c8af18afc2693e59bf	Exchangeable Image File Format			
14	A Digital Dog Collection/Meme Potential/	DP doge.jpg	2015-03-23T15:47:59.000	160810	8b3bd9afad0cfa723	JPEG File Interchange Format			
15	A Digital Dog Collection/Meme Potential/	Husky_Yawn.jpg	2015-03-23T14:58:56.000	572373	85562ffa27e2d6754	JPEG File Interchange Format			
16	A Digital Dog Collection/Meme Potential/	Marley.jpg	2015-03-23T14:57:05.000	48366	43d2a524ea4f42fd8	JPEG File Interchange Format			
17	A Digital Dog Collection/Meme Potential/	Mission NIU.jpg	2015-03-23T15:29:31.000	117662	6f8bd3a9cbd7a1059	JPEG File Interchange Format			
18	A Digital Dog Collection/Meme Potential/	Twinsies.jpg	2015-03-23T15:07:46.000	37563	9d9d8ab31c1c2675f	JPEG File Interchange Format			
19	A Digital Dog Collection/Meme Potential/	Watermelon_thief.jpg	2015-03-23T15:07:59.000	33997	b79becf2b6972c079	JPEG File Interchange Format			
20	A Digital Dog Collection/Puppies/	Bath_time.jpg	2015-03-23T15:10:52.000	28354	6c939fe1abeffb9a81	JPEG File Interchange Format			
21	A Digital Dog Collection/Puppies/	Brown_puppy_(9899551176).jpg	2015-03-23T14:48:59.000	6134224	c36586d1f2f3b670e	Exchangeable Image File Format			
22	A Digital Dog Collection/Puppies/	Young Marley.jpg	2015-03-24T08:52:45.000	34482	3a66d55a12236fe37	JPEG File Interchange Format			

# **CONGRATULATIONS!**

**We call this “Digital Preservation in Your Office”**

**There are things that need to happen *outside* of  
your office as well....**

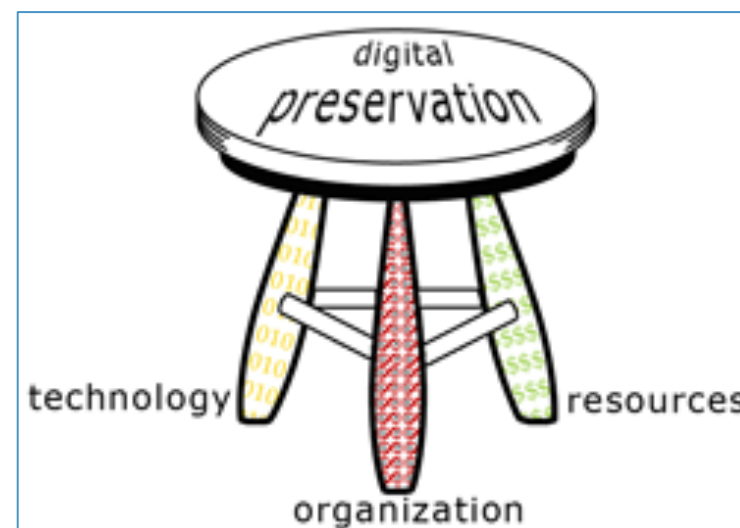
# Outside Your Office

Digital Preservation is not sustainable by just using a tool or selecting a service. Sustainability takes funding and people.

You cannot do this alone. **You will need to talk to other people...** because you are not the only boss of this.

Successful Digital Preservation programs take a team of people at multiple administrative levels.

## Three-Legged Stool of Digital Preservation



Anne R. Kenney  
Nancy McGovern  
*Digital Preservation Management Workshop*  
<http://www.dpworkshop.org/>




# Assemble Your Team!



Image: Flickr Commons

# Step 1: Who should care about DP?

List the roles/titles of all those who *should* be involved in DP at your organizations

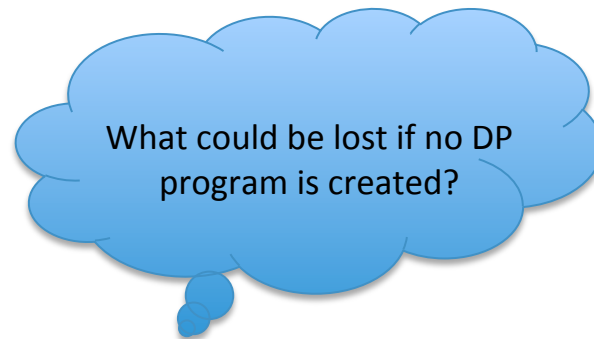


Who needs to be involved to implement DP activities?



## Step 2: What happens if they don't?

Make a list of potential consequences—what will happen if your peers don't take action?



## **Step 3: The 3-3-3 Approach!**

3 people

3 months

3 activities

# Make your plan

Identify 3 people *at your institution*

Identify an action you could take with each in the next 3 months

e.g.:

Who	What	When
Howard Catier (Dean)	Coffee debrief	2 weeks
Cathleen Debose (Metadata Libr)	Mapping metadata, functional req's	3 months
Irene Ptowskey (Schol Comm Libr)	Policy Review	2 months

# Examples of Initial DP Activities

## Present

- Awareness-raising meetings
- Brownbag presentation

## Identify

- Compile a digital content inventory
- Analyze file formats used
- Analyze metadata practices
- Review current policies
- Diagram current workflows

## Study

- Investigate tools
- Review other institutions' policies
- Read the POWRR white paper
- Survey staff on existing practices

## Update

- Enhance existing metadata
- Add digital content to policies
- Produce digital preservation plan

# **Now Let's Assess...**

**How will you know if your 3 activities succeeded?**

- Added people to team?
- Number of people newly educated?
- Number of items added to inventory?
- Number of tools investigated?
- Number of DP policies reviewed?
- Revised standing policies?

**BREAK TIME!**

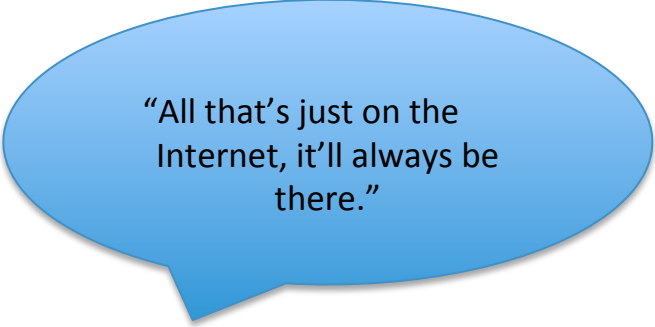
**Back by 2:45, please**

Next Steps:

Advocacy, Policy, and Potential Solution Models

# Next Steps: Advocacy

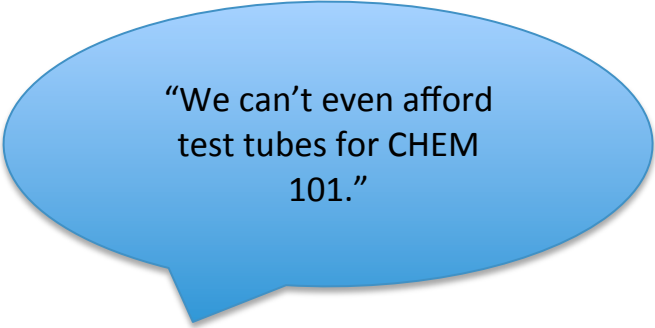
- Advocacy is valuable because you're educating people about why digital preservation is also THEIR problem.



"All that's just on the Internet, it'll always be there."



"There's a hiring freeze on campus."



"We can't even afford test tubes for CHEM 101."

# Next Steps: Towards a Policy

**You have started assembling your team....now what?**

We found a gap analysis *really* helpful:

- Where are you now?
- Where would you ideally like to be?
- What is keeping your institution from moving in that direction?
- What are some interim steps you can take to move in the right direction?



# Next Steps: Towards a Policy

We also found that Gap Analyses can be challenging...

- Be brutally honest. It's the only way to move forward.
- Look closely at risk: What is the cost of doing nothing?
- Documenting what you know will tell you what you don't know.
- Feel free to look at our case studies and see how it worked. Our wiki has the case studies of all 5 of the POWRR partner institutions.

[http://powrr-wiki.lib.niu.edu/index.php/Main\\_Page](http://powrr-wiki.lib.niu.edu/index.php/Main_Page)

# Solution in Practice is Iterative

- Not all tools and services are created equal.
- Choices of tools are *not* forever. They serve what you need now, selected with an eye to later.
- Starting small is good enough! A simple tool may still move you closer to your goals.
- Knowing what you have is crucial. Documentation more so.
- You already have many of the necessary skills!

**Next Steps: Potential Solution Models**

# How to Decide? Results May Vary...

Things to consider:

- How many staff members will be actively engaged in the digital curation lifecycle? Are they tech-savvy?
- How robust and supportive is your technical/systems group? Do you even have one? How about some developers/programmers...have any of those on staff?
- Is your institution already using archival management software or an Institutional Repository (like ARCHON/ArchivesSpace, BePress, Fedora etc.)? You'll want to select tools/services that work well with what you have.
- Do you have digital collections unique to your institution that are irreplaceable? Consider organizing collections along the lines of those that warrant more robust preservation services than others. For example:

1 TB (High Value)	→	MetaArchive (gold standard)
3 TB (Medium Value)	→	Amazon Glacier (cheapest storage with fixity checking)
Rest (Replaceable)	→	Tape Drive Backups

**In other words: One tool/service will not be your only solution.**

# How to Decide? Results May Vary...

Remember: Smaller institutions with less resources may also have unique advantages like....

It doesn't take years to set up an account with something like DuraCloud.

You only need to convince the person one level above you to get what you need.

Want to install a simple open source tool? Go for it!

- Less red tape for getting things done
- Fewer levels to push requests for additional resources through
- Self-administered workstations (aka no IT administrative lock downs)
- Personnel-heavy operating model (usually has smaller cash flow)
- Higher cash flows and less data (like small, private institution)

This is ideal for running a \*free\* robust tool that requires a developer and server administrator like Archivematica.

You can purchase a reasonably-priced, hosted soup-to-nuts solution.

## Next Steps: Potential Solution Models

**POWRR White Paper available at:**

<http://commons.lib.niu.edu/handle/10843/13610>

### From Theory to Action:

**“Good Enough” Digital Preservation Solutions for  
Under-Resourced Cultural Heritage Institutions**

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**A Digital POWRR White Paper for the  
Institute of Museum and Library Services**

*August 2014*

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# Wrapping Up

## Our Final Thoughts & Your Questions

I survived the POWRR workshop! Now what?

<https://digitalPOWRR.niu.edu/survived-powrr-wkshp/>

We're here to help. Seriously.

YOU CAN DO THIS. Really. But not alone. So bring some friends.

*"If you want to go fast...go alone. If you want to go far...go together."* — African Proverb

Remember: Baby steps still move you forward!

## **Evaluation Time! (10 minutes)**

- Post-Test
- Workshop evaluation...tells us about pace, style of presenting, etc.

## **In 3 Months...**

- Emailing you a brief survey around your 3-3-3 Action Plan
- Google Hangout?

**Please note: The NEH requires us to do these things...and it helps to make sure these workshops are delivering outcomes that bring tangible results to our peers!**



# Thank You for Coming!

## PLEASE RETURN:

- Pre & Post Tests
- Workshop Evaluation



# POWRR Project Team Members

Contact us...we are here to help!

## *Northern Illinois University*

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\* Presented today