

# Broken for all: the case for persistent identifiers for digital cultural heritage resources



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2. Deb Holmes-Wong & Zahid Rafique, *USC Digital Library*
3. Megan Lohnash, *California Revealed* & Allison Lund, *Metropolitan New York Library Council*
4. Adrian Turner, *California Digital Library*
5. Matthew McKinley, *Omeka*

June 2021



# Why persistent URLs?



Because persistent, reliable, unbroken web links (URLs) are rare

- Average URL lifetime is 100 days
- But why not just do an internet search when you need one? Because:
  - Scholars, writers, and researchers compile reference (URL) lists with great care
  - URLs cannot be controlled once they're in the wild:  
books, articles, news, Wikipedia, theses, social media, DPLA, ...

# Where can we go for stable URLs?

404



I know! We can trust URLs from *libraries, archives, and museums*, since they safeguard cultural and scientific heritage, right?

**NOPE**

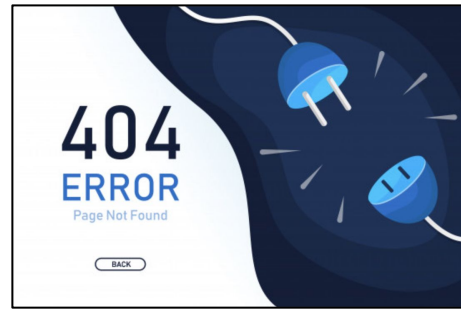
*Shockingly*, few memory organizations and their vendors have software solutions that support persistent URLs.

# How cultural heritage links break

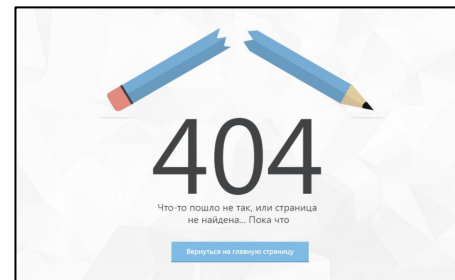
GLAMs use DAMS,  
DAMS use databases,  
databases re-generate new URLs,  
frequently.

For example, widespread URL change can occur

- when the database is reloaded,
- when the software is updated,
- when the content migrates between DAMS vendors



# Broken for all



- all citations in articles, books, blogs, wikipedia, theses, ...
- all links in twitter, Facebook, Linked Open Data, library MARC records, ...
- all aggregator links, such as Digital Public Library of America, Calisphere, ...

# Permalinks – persistent URLs

Permalink: a persistent URL

- once published, it won't need to be changed
- as system changes, the permalink keeps working

Example: many WordPress URLs are permalinks

<http://arks.org/blog/the-louvre-collection-goes-online-with-483000-arks>

- if the database or version changes, software keeps them working
- if the domain changes, content managers “redirect” to keep them working



# Persistent identifiers $\subset$ Permalinks

A *persistent identifier* is an internally labeled permalink.

- label tells you what kind of PID (persistent ID) it is
- well-known kinds: ARK, DOI, Handle, PURL, URN
- some kinds have fees; all make you redirect; none prevent error, fire, war, ...
- but one big advantage of PIDs: in the wild they self-declare *intent*



# PID examples and labels

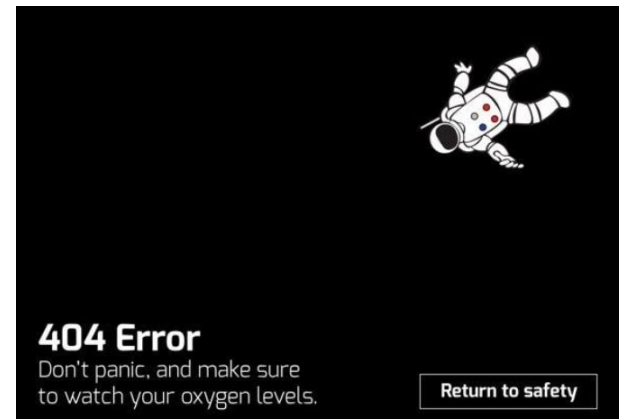
`https://n2t.net/ark:/53355/c1010066723`

`https://doi.org/10.1038/sdata.2018.95`

`https://hdl.handle.net/4263537/4001`

`https://n2t.net/urn:nbn:fi:tkk-004781`

*GLAMs must go to great lengths to support PIDs or Permalinks on their own.*





# DOIs for Discovery: A CONTENTdm Use Case

Open Repositories June 9, 2021

Deborah Holmes-Wong, Director, University of Southern California Digital Library <[dhwong@usc.edu](mailto:dhwong@usc.edu)>  
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# Background

## University of Southern California Libraries

- Digital Library
- Digital Repository

## Information Sciences Institute

- FaceBase
- GUDMap
- RBK
- Synapse

## Other units produce

- Technical reports
- Data sets
- Journals
- News reports

# Issue: Migration & Citation

- Migrating can't keep/reuse URLs from previous systems
  - Migrated 3 times in 25 years
  - 3 times all links broke: citations to nothing
  - Reharvest (Calisphere, Worldcat, etc.)
- We now have
  - 500,000 objects, 1.5 million files
  - 1.9 million unique users per year (Google Analytics)
  - 1000 license/use requests/year
  - Classroom/Exhibit use w/Scalar.
- We are migrating to a new system.

**This time must be different!**

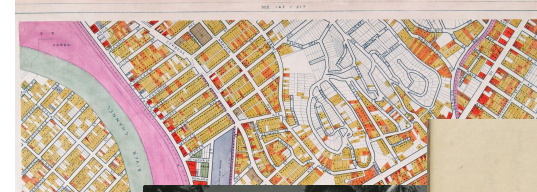


# DOIs

Discovery: We need to provide a URL that doesn't change over time for data harvesters and end users alike because we are going to migrate our content into new systems and researchers need to be able to get back to our assets from other works.

# CONTENTdm Issues

- No support for permalinks
- CONTENTdm(CDM) - packages assets/digital objects simple items/compound objects
  - Metadata + files
  - Not individual files
- Packaging
  - Best - Individual images, maps, books, ETDs.
  - Worst - EAD folder level objects, multipart objects
- Difficult to get the DOIs into CDM
- DOIs available in OAI harvest only (We use our own data provider not CDM)



CONTENTS	
Editorial	4
A Letter from Dr. Rosen	5
Dr. Rosen on the Japanese Rodeo	5
Notes of Popular Culture in University	6
The Census in Japanese Literature by Prof. John G. Hill	6
The Japanese Student Organization	6
The Study of Japanese Literature by Dr. Andrew D. Ross	6
The Lash of the Whip and the Gun by Dr. James M. Strain	7
The Japanese Rodeo	7
Some Aspects of Japanese Tradition by M. J. Tamm	10
The Characteristics of Japanese Rodeo	10
Constitution	11
To a Poet's Verse	11

Published Yearly by the  
JAPANESE STUDY ASSOCIATION  
UNIVERSITY OF SOUTHERN CALIFORNIA  
Sold at  
SATO'S BOOK STORE,  
Los Angeles.  
• etc. Postage 5c

Editor	Shiro Haseki
Business Man	Shiro Haseki
Advertising	Shiro Haseki

# Implementation

# Example

DOI:

<https://doi.org/10.25549/whit-m12485>

Base URL: <https://doi.org>

Repository Id: [10.25549](https://doi.org/10.25549)

Resource Id: [whit-m12485](https://doi.org/10.25549/whit-m12485)

Resource:

<http://digitallibrary.usc.edu/digital/collection/p15799coll170/id/5409>

## DataCite Fabrica

About Support USC.DL ▾

University of Southern California Digital Library / DOIs

**10.25549/whit-m12485**

 Update DOI (Form)

 Update DOI (File Upload)

Findable

Metadata Export

[DataCite XML](#)

[DataCite JSON](#)

[Schema.org JSON-LD](#)

[BibTeX](#)

DOI created

April 27, 2018, 11:57:47

UTC

DOI registered

April 27, 2018, 11:57:48

UTC

DOI last updated

September 20, 2020,

01:44:35 UTC

Schema 

[DataCite Metadata](#)

[Schema 4](#)

### URL

<http://digitallibrary.usc.edu/cdm/ref/collection/p15799coll170/id/5409>

### Metadata

Summary View ▾

#### Shop Pictures, Whittington Studio, Southern California, 1925

Dataset

Dick Whittington Studio,

Dataset published 2016 via University of Southern California Digital Library (USC.DL)

2 photographs of print workshop, Whittington, Southern California, 1925. "Subject: Shop Pictures; Client: Whittington; Year: 1925; Job: 56-21-50" -- on envelope 1; Photograph of Whittington Studio enlarging area, Southern California, 1925. "56-21-50; 1925; Whittington Studio enlarging area" -- on envelope 2, front.

 <https://doi.org/10.25549/whit-m12485>

### Citation

APA ▾

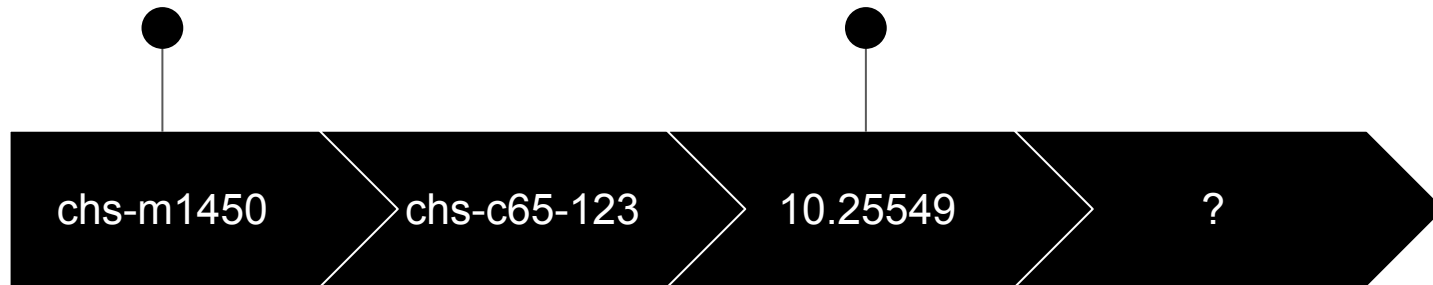
Studio, D. W. (2016). *Shop Pictures, Whittington Studio, Southern California, 1925* [Data set]. University of Southern California Digital Library (USC.DL). <https://doi.org/10.25549/WHIT-M12485>

Documentum

Legacy Ids

DataCite

Repository Id



Contentdm

Legacy Ids

Orange Logic




# Components

1. DataCite REST API  
Mint the DOIs
2. DataCite MDS API  
Create Metadata in Fabrica
3. OCLC Contentdm API  
Pull resource metadata
4. Local MYSQL database  
Processing queue
5. Java based Application  
Glue all of it together  
Updates OAI Data Provider



# Ongoing Challenges



Granularity

**What unit gets the DOI?**

- Files
- Digital Objects?

Decision: Digital Objects

Metadata + Files

Migration

**Updating to include DOI**

Decision: Only available through data provider.

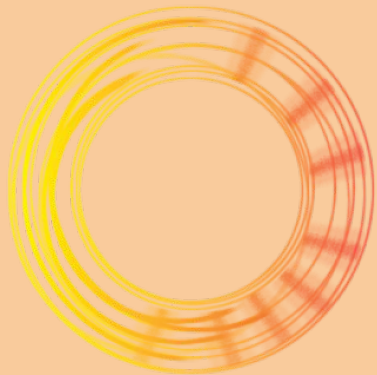
Include DOI in new system as migrating and creating new content.

Maintenance

**Managing DataCite**

DOIs only work if maintain them.

- Who's responsible for maintaining DOIs not managed by Digital Library or ISI?
- Will they know they need to manage them?



# CALIFORNIA REVEALED

Islandora to Archipelago

June 9, 2021

Megan Lohnash - [mlohnash@californiarevealed.org](mailto:mlohnash@californiarevealed.org)

Digital Repository Manager



# California Revealed's History

- 2010 California Audiovisual Preservation Program founded
  - ContentDM
  - [Internet Archive](#)
  - Linear Tape Open (LTO) storage
  - OAI harvests of records by aggregators
- 2015/2016 migration to Islandora
- 2017 became California Revealed Program
- 2018 public facing website launched
- 2018 restart of aggregator harvesting
- 2020/2021 migration to Archipelago

# Our Identifiers and URLs

- Object Identifier
- Internet Archive URL
- ARK Identifier
- Islandora 7 PID (or Node Id)

# Why do we care about Persistent IDs and URLs? Access continuity

- Long term management of digital assets
- Aggregator harvest
- References to California Revealed
  - Exhibits and Publications
  - Researchers
  - Educator resources

# Persistent URLs in Archipelago

## Strategies for Migrations and Out-of-the-Box(es)

[archipelago.nyc/  
github.com/esmero/archipelago-deployment](https://archipelago.nyc/github.com/esmero/archipelago-deployment)



**Metropolitan New York Library Council**

Allison Lund - [alund@metro.org](mailto:alund@metro.org)

*Digital Projects & Metadata Librarian*



# Archipelago

- An open source repository software
- Development home at the Metropolitan New York Library Council (METRO)

- Slim, smart open source repository software built on top of Drupal [8/9](#)
- Custom Drupal Modules
  - [Strawberry Field modules](#)
- Curated list of well maintained **Community Drupal Modules**
- A custom **Docker** deployment strategy that delivers all required Services
  - [Local](#) / [Production](#) /
  - Or “[Bare-metal](#)” for rebel-hearts
- Getting started **Configurations**
- Basic **Metadata Templates** (IIIF, MODS, DC, LoD Display all via [Twig](#))
- Matching [Webforms](#) for ingesting



# Archipelago Links & Facts

- for further reading!

## Links:

[archipelago.nyc](https://archipelago.nyc)  
[Archipelago Playground](#)  
[Google Group](#)  
[Technical roadmap](#)  
[Active development repos](#)  
[Archipelago 1.0.0-RC2 Specs and features](#)

## Facts:

Current stable branch is **1.0.0-RC2**  
Archipelago is [GNU V3](#)  
Archipelago has an [Advisory Board](#)  
Archipelago has a lovely caring  
[Community](#)  
Archipelago extends and empowers  
[Drupal](#) 8/9



# Archipelago and Persistent URLs

- Out-of-the-box(es) Deployments
- Technical Strategy for Persistent URL support

**Persistent URL** for every Archipelago Digital Object or Collection:

- <https://yourdomain/do/UUID>
- Whether ingested via webform, remoteAPI (drush), or batch import (via the [AMI module](#))

Persistent URLs for **IIIF manifests** too:

- <http://yourdomain/do/UUID/metadata/iiifmanifest/default.jsonld>

\*\*More info on [Archipelago's File Persistence Strategy](#)

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# Archipelago and California Revealed

- Migration from Islandora 7 to Archipelago
- Background Context for METRO's involvement

- METRO's development team, led by Archipelago's lead architect & METRO's Assistant Director for Digital Strategy [Diego Pino Navarro](#), has been consulting with the development team at [Born Digital](#), who is handling the migration of California Revealed from Islandora 7 to Archipelago
- METRO is also in the process of migrating our shared repository, Digital Culture of Metropolitan New York ([dcmny.org](#)), from Islandora 7 to Archipelago



# Archipelago and California Revealed

- Migration from Islandora 7 to Archipelago
- Background Context for METRO's involvement

- Most (**almost all**) of the collections in DCMNY were harvested into DPLA in the mid-2010s timeframe, through the now-sunsetted Empire State Digital Network DPLA Service Hub ([closed since 2019](#))
- Any DPLA-harvested/aggregated DCMNY collections and materials will need to have redirects once migrated to Archipelago
  - Some of our DCMNY partners also use the current (I7) URLs on their own websites
- As **always**, we want to best support consistent and reliable access to our partners trusted digital resources for researchers, educators, and users of all shapes and sizes



# Archipelago and California Revealed

- Migration from Islandora 7 to Archipelago
- Technical Strategy for Persistent URL support

- Current data structure in California Revealed:
  - Includes the **PID** for Islandora 7 (**namespace:UUID**)
  - **ARK IDs** (that currently point to the I7 ID *~more about the ARK IDs a little later*)
  - Both of these two primary IDs, along with all of the other important IDs currently found in California Revealed's I7 Repository, will be part of the data structure for all materials migrated to Archipelago



# Archipelago and California Revealed

- Migration from Islandora 7 to Archipelago
- Technical Strategy for Persistent URL support

- During the initial migration phase, the [Archipelago Multi Importer](#) (with [Islandora 7 SOLR plugin](#)) will be configured to use:
  - the **UUID** from the **PID** (`namespace: UUID`) for the I7 Digital Object for the **new UUID** for the Archipelago Digital Object



# Archipelago and California Revealed

- Migration from Islandora 7 to Archipelago
- Technical Strategy for Persistent URL support

For the next step in the process for persistent URL support (redirection):

- Using a specially-configured **internal resolver** in Archipelago following the `pattern(s)` established by a **controller**.
- Take the **PID (namespace:uuid)**, and, if it is valid, redirect permanently to the Archipelago `/do/uuid`

*\*\*Also under consideration is using an existing path alias Drupal extension ([Redirect](#); or [Pathauto](#))*

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# Archipelago and California Revealed

- Migration from Islandora 7 to Archipelago
- Technical Strategy for Persistent URL support

- For **ARK IDs** in California Revealed (~back to *Megan* for more context on ARKs in CAR)
  - development teams at METRO and Born Digital are currently exploring tapping into the ARKs API (via the Internet Archive for C-AR) to update existing URLs to point to Archipelago */do/uuid*'s
  - could take place after or during the migration
  - generate new ARK IDs for future ingests (*if desired*)





# Thank you!

## Contacts:

- **Diego Pino Navarro** ([dpino@metro.org](mailto:dpino@metro.org))  
*Archipelago's Lead Architect and A.D. for Digital Strategy at METRO*
- **Allison Lund** ([alund@metro.org](mailto:alund@metro.org))  
*Digital Projects & Metadata Librarian at METRO*
- **Nate Hill** ([nhill@metro.org](mailto:nhill@metro.org))  
*Director at METRO*

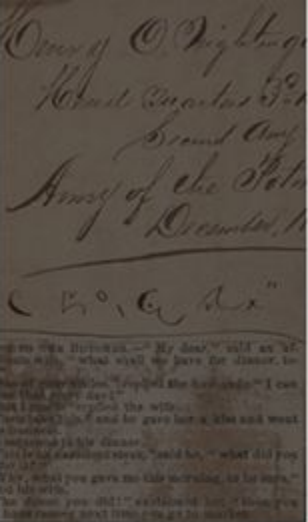
## Born Digital:

- **Pat Dunlavey** ([pat@born-digital.com](mailto:pat@born-digital.com))  
*Senior Digital Repository Developer*
- **Derek Merleaux** ([derek@born-digital.com](mailto:derek@born-digital.com))  
*Senior Consultant and Project Manager*

## More Information & Greatest Hits 🎵

- o <https://archipelago.nyc>
- o Deploying your very own Archipelago (20 minutes):  
<https://github.com/esmero/archipelago-deployment>
- o Archipelago Documentation:  
<https://github.com/esmero/archipelago-documentation/tree/1.0.0-RC2>
- o Technical Roadmap:  
<https://github.com/esmero/archipelago-deployment/issues/103>
- o Specs & Features for RC2:  
<https://docs.google.com/document/d/1k935L6grlUki45GjBuVCnl5kWsw6RiEVBqd00pBv3Xo/edit>
- o Google Community Group:  
<https://groups.google.com/g/archipelago-commons>





# Broken for All: Aggregation Considerations

Open Repositories 2021

2021-06-09

**Adrian Turner**

California Digital Library

[adrian.turner@ucop.edu](mailto:adrian.turner@ucop.edu)



The deeper you look, the more you discover.

Search over one million items



Oakland Larks Players / Oakland Public Library, African American Museum and Library at Oakland

Calisphere is your gateway to digital collections from California's great libraries, archives, and museums. Discover over 1,975,000 images, texts, and recordings. Watch an [introductory video](#) to learn more.

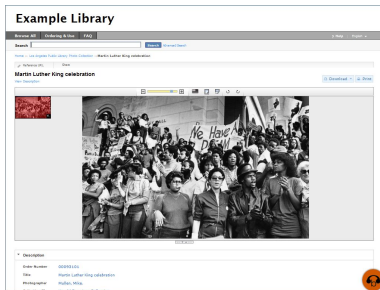


Coachella Valley onion field, 1929 / Pomona Public Library



Woman holding a small torch / Los Angeles Public Library

## Content sharing platforms / digital asset management systems\*

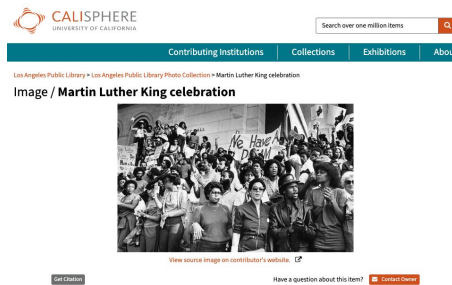


\*DAMS we've worked with include: CONTENTdm, PastPerfect, Islandora, Samvera,.Preservica, Omeka, and others

<https://cdm12345.org/digital/item1>

Harvest

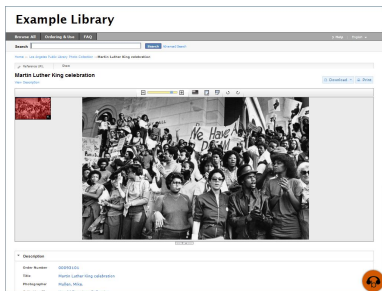
## Calisphere



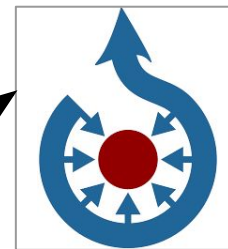
Link back

<https://calisphere.org/item/85691e448b4d8f8884e6a/>

# Digital Asset Management System

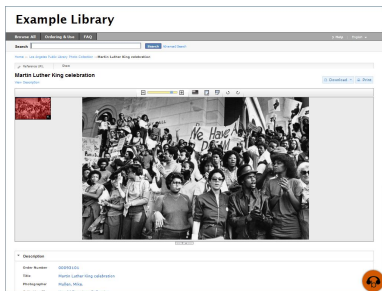


<https://cdm12345.org/digital/item1>

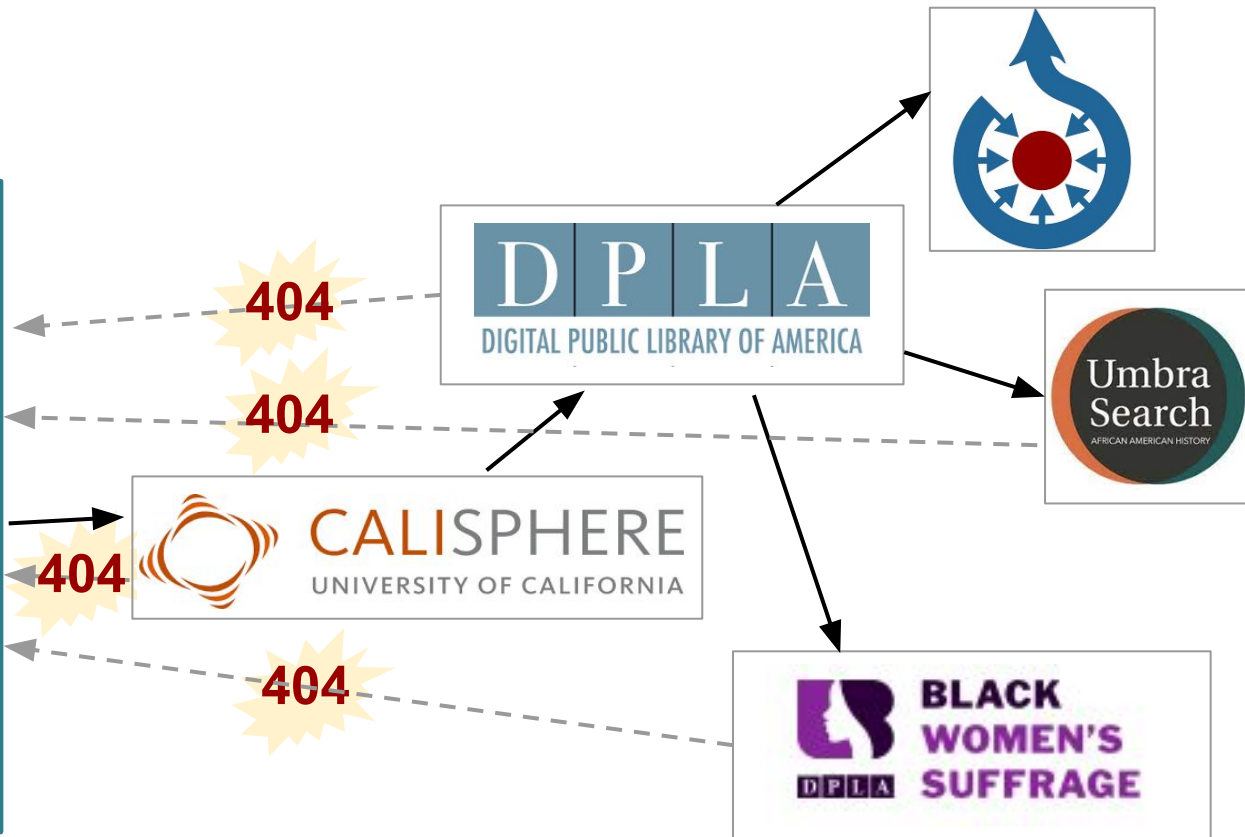




# Digital Asset Management System




<https://examplelibrary.org/item1>





**Digital Asset Management System 2**



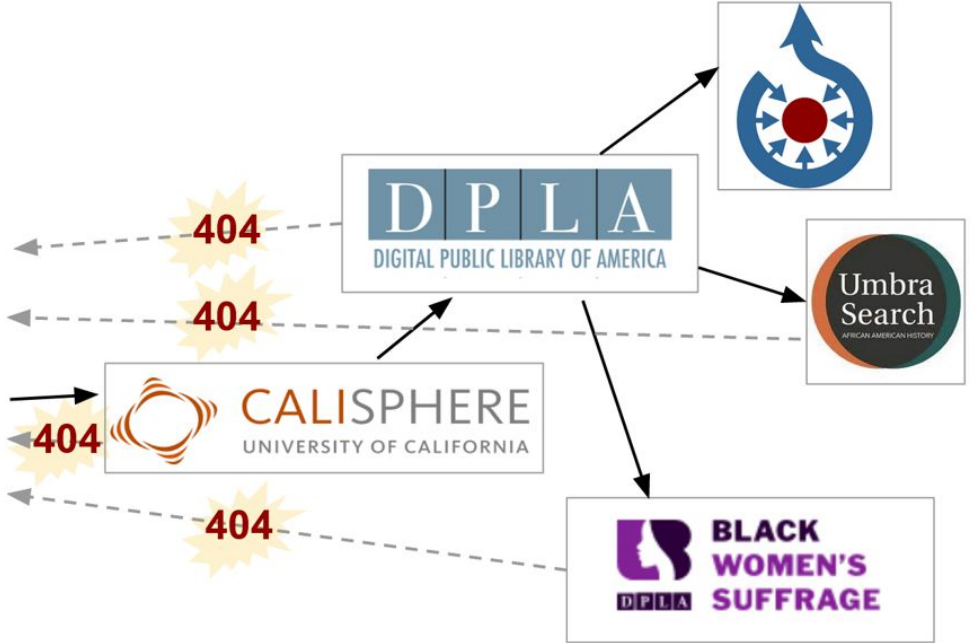
<https://examplelibrary.org/item1>



**Digital Asset Management System 1**

404

<https://cdm12345.org/digital/item1>





Whoops! Something went wrong here!

404: Not Found

Try another search



If you think this is a problem with Calisphere, please [contact us](#).

Or return to the [homepage](#).

Toe stuck in a bowling ball / Los Angeles Public Library

# What can we do?



## As a **DAMS implementor**

- At minimum, redirect URLs for slight URL changes or migrations
- Ideally, use persistent URLs from a known PID scheme
- Include persistent URL support in your DAMS selection requirements
- Register this as a functional priority to DAMS developers, in your feedback and features wishlists

## As a **DAMS developer or service provider**

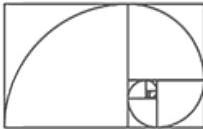
- Please explore options for supporting persistent URLs as a core feature
- If facilitating migrations, support strategies to redirect URLs

## As a **digital collections aggregator**

- Proactively identify broken URLs; work with contributors on resolving the links
- Promote awareness of these issues and advocate for persistent URLs

# Integrating Persistent Identifiers into Omeka S

Matthew McKinley  
Programmer, [Omeka.org](https://omeka.org)  
[matthewjamesmckinley@gmail.com](mailto:matthewjamesmckinley@gmail.com)



omeka

# OMEKA S

For institutions managing a sharable resource pool across multiple sites.

Download v3.0.2

Learn more

The screenshot shows the Omeka S administration interface. The main content area is titled 'Edit Main Navy and Munitions Buildings'. It features a sidebar on the left with navigation options like 'Sites', 'Resources', 'Items', 'Vocabularies', 'Resource templates', 'Admin', 'Users', 'Modules', 'Jobs', 'Settings', and 'Modules'. The main panel has tabs for 'Values', 'Media', and 'Item sets'. The 'Values' tab is active, showing fields for 'Resource template', 'Class', 'Title', 'Description', and 'Date'. The 'Title' field contains 'Main Navy and Munitions Buildings' and the 'Description' field contains 'The Main Navy and Munitions temporary war buildings were built quickly in 1918 during World War I under the direction of'. The 'Date' field contains '1918 (Constructed)'. There are also 'Delete' and 'Save' buttons at the top right of the edit panel.

# OMEKA CLASSIC

For individual projects and educators.

Download v2.8

Learn more

The screenshot shows the Omeka Classic 'Browse Items' interface. The main content area is titled 'Browse Items (204 total)'. It features a sidebar on the left with navigation options like 'Dashboard', 'Items', 'Collections', 'Item Types', 'Tags', 'Exhibits', 'Map', 'Simple Pages', 'Omeka Api Import', and 'Item Relations'. The main panel shows a list of items with columns for 'Title', 'Creator', 'Type', and 'Date Added'. The list contains several items, including 'Jane Austen', 'Lansdowne portrait of George Washington', 'Henrietta Maria Bordley, age 10', 'The Artist in His Museum', and 'The Five Orange Pips'. There are also 'Add an item', 'Show Details', 'Search items', and 'Quick Filter' buttons at the top of the list.

Title	Creator	Type	Date Added
Jane Austen		People	Apr 13, 2017
Lansdowne portrait of George Washington	Gilbert Stuart		Apr 13, 2017
Henrietta Maria Bordley, age 10	Charles Wilson Peale		Apr 13, 2017
The Artist in His Museum	Charles Wilson Peale	Still Image	Apr 13, 2017
The Five Orange Pips	Sir Arthur Conan Doyle	Text	Apr 13, 2017

Omeka provides open-source web publishing platforms for sharing digital collections and creating media-rich online exhibits.

# Modules

[Register your module](#)Sort: 

## Advanced Search Plus

By [Daniel Berthereau](#)

Add some fields to the advanced search form (before/after creation date, has media, media type, etc.).

[Download](#)

Latest Version: 3.3.5.3

Updated: October 27, 2020

## Alt Text

By [John Flatness](#)

Customize alt text for media

[Download](#)

Latest Version: 1.2.1

Updated: February 25, 2021

## Analytics Snippet

By [Daniel Berthereau](#)

Add a snippet, generally a javascript tracker, at the end of the public or admin pages, and allows to track json and xml requests.

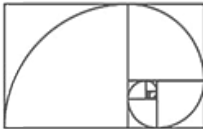
[Download](#)

Latest Version: 3.3.3.1

Updated: February 15, 2021

# PID Module Requirements

- Mint & assign new PIDs via API
- Discover & assign existing PIDs within metadata
- Resolve PID to user-friendly landing page
- Ability to (eventually) switch between multiple PID services



# Existing ARK module

## Ark & Noid (module for Omeka S)

<https://gitlab.com/Daniel-KM/Omeka-S-module-Ark>

New versions of this module and support for Omeka S version 3.0 and above are available on [GitLab](#), which seems to respect users and privacy better than the previous repository.

[Ark & Noid](#) is a module for [Omeka S](#) that creates and manages [ark identifiers](#). They can be used in urls the admin and the public side with the module [Clean Url](#).

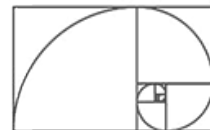
The [ark identifiers](#) can replace the default [cool URIs](#) of each record, that corresponds to the simple number of a row in a table of the database.

Arks are short, opaque, meaningless, universal, unique and persistent ids for any records. The acronym "ark" means "Archival Resource Key". This is a reference to the Noah's ark (digital documents will have a long life) and to the world of archives (Omeka can be an institutional archive) too. Optionally, the identifiers can be resolved via a service as [N2T](#), the Name-to-Thing Resolver.

Arks may be built with the utility [Noid](#), that creates nice opaque identifiers, that is integrated too via the library [Noid4Php](#).

See a living example in the [bibnum of PSL](#) or in [Bibliothèque patrimoniale](#) of [Mines ParisTech](#).

If you don't have an authority number, the plugin will create a non standard ark, but nevertheless a unique and opaque identifier that can be managed.

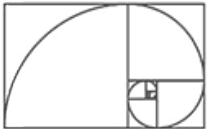


omeka



# Why make another Module?

- Need for PID types other than ARKs
- More fine-grain control
  - Selective assignment, assign from existing, etc.
- Ownership by Omeka team



# Issue: Shifting 'target'

## Mall History Content

[About](#) [Map](#) [Monuments and Memorials](#) [Daily life on and around the Mall](#) [Events](#) [See Also](#)



### Allosaurus Arrives on the Mall

ITEM

#### Title

Allosaurus Arrives on the Mall

#### Description

In April 1987 a one-ton fiberglass Allosaurus sculpture was moved into the National Museum of Natural History. A crowd formed on the Mall at the steps of the museum to watch the dinosaur lifted into the building with a winch. The 20-foot-long model was featured in the "Dinosaurs, Past and Present," a temporary exhibit displaying artistic representations of dinosaurs constructed in the 1800 and 1900s. After three months, the Allosaurus and other works traveled to museums across North America.

#### Source

Smithsonian Institution Archives. [View Original](#).

#### Date

04/28/1987 (Allosaurus Arrival)

06/04/1987 ( "Dinosaurs, Past and Present" Opens)

08/31/1987 ( "Dinosaurs, Past and Present" Closes)

<http://dev.omeka.org/omeka-s-sandbox/s/mallhistory/item/1138>

# Issue: Shifting 'target'

## Media Examples

[Introduction](#) [Media Examples](#) [Browse](#)



### Allosaurus Arrives on the Mall

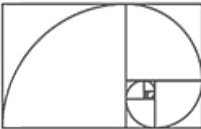
ITEM



<http://dev.omeka.org/omeka-s-sandbox/s/media-examples/item/1138>

# Potential Solutions

- 'Update PIDs' per site (moving target)
- Assign new PID per site (multiple targets)
- Site-agnostic landing page (single target)



# Single Target Approach

<http://dev.omeka.org/omeka-s-sandbox/api/items/1138>

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    "medium": "http://dev.omeka.org/omeka-s-sandbox/files/medium/50fca8384a7b87868cb77eb656cb9d365f09d61.jpg",
    "square": "http://dev.omeka.org/omeka-s-sandbox/files/square/50fca8384a7b87868cb77eb656cb9d365f09d61.jpg"
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    "@type": "http://www.w3.org/2001/XMLSchema#dateTime"
  },
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    "@type": "http://www.w3.org/2001/XMLSchema#dateTime"
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      "@id": "http://dev.omeka.org/omeka-s-sandbox/api/sites/4",
      "o:id": 4
    }
  ]
}
```

# Single Target Approach

<http://dev.omeka.org/omeka-s-sandbox/api/items/1138>

```
{
  "@context": "http://dev.omeka.org/omeka-s-sandbox/api-context",
  "@id": "http://dev.omeka.org/omeka-s-sandbox/api/items/1138",
  "@type": [
    "o:Item",
    "dctype:StillImage"
  ],
  "o:id": 1138,
  "o:is_public": true,
  "o:owner": {
    "@id": "http://dev.omeka.org/omeka-s-sandbox/api/users/1",
    "o:id": 1
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  "o:resource_class": {
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  "o:resource_template": null,
  "o:thumbnail": null,
  "o:title": "Allosaurus Arrives on the Mall",
  "thumbnail_display_urls": {
    "large": "http://dev.omeka.org/omeka-s-sandbox/files/large/50fcad8384a7b87868cb77eb656cb9d365f09d61.jpg",
    "medium": "http://dev.omeka.org/omeka-s-sandbox/files/medium/50fcad8384a7b87868cb77eb656cb9d365f09d61.jpg",
    "square": "http://dev.omeka.org/omeka-s-sandbox/files/square/50fcad8384a7b87868cb77eb656cb9d365f09d61.jpg"
  },
  "o:created": {
    "@value": "2017-04-25T18:39:39+00:00",
    "@type": "http://www.w3.org/2001/XMLSchema#dateTime"
  },
  "o:modified": {
    "@value": "2017-06-05T20:05:00+00:00",
    "@type": "http://www.w3.org/2001/XMLSchema#dateTime"
  },
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      "@id": "http://dev.omeka.org/omeka-s-sandbox/api/media/3404",
      "o:id": 3404
    }
  ],
  "o:item_set": [
    {
      "@id": "http://dev.omeka.org/omeka-s-sandbox/api/item_sets/275",
      "o:id": 275
    }
  ],
  "o:site": [
    {
      "@id": "http://dev.omeka.org/omeka-s-sandbox/api/sites/4",
      "o:id": 4
    }
  ],
}
```

Content  
negotiation

<http://dev.omeka.org/omeka-s-sandbox/perm/1138>

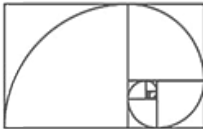
## Allosaurus Arrives on the Mall

ITEM



# Planned Features

- Poll user community for initial PID schema
- Option to mint/assign PIDs for all new items
- Selectively mint/Assign PIDs on batch item edit screen
- Discover/assign PIDs from existing metadata field(s)



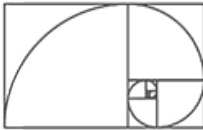


# Thank you!



<https://forum.omeka.org>

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