

Portland Common Data Model (PCDM): Creating and Sharing Complex Digital Objects

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Agenda

Purpose and History

Technical Details

Current Work

Future

Q & A

Why a common data model?

- Common language and concepts for:
 - simple to complex object structure
 - rights assertions and access control
 - technical metadata
- Allows for shared objects and coding efforts rather than reinventing for every instance
- Aggregates many minds, projects, and products around difficult concepts
- RDF approach allows for extensibility for the future and local customization

PCDM History

- Hydra implements basic RDF 4/2012
- UCSD complex object data modeling work published 10/2012
- Oregon RDF work - linked open data and vocabularies registry 2013
- Stanford RDF meeting 10/2013
- Hydra Connect 2014
- Use cases on Github - open process 2014 - (more than developers)
- Portland meeting 11/2014
- Portland Code4Lib PCDM Meeting 2/2015
 - concepts like “works,” “resource,” FRBR removed from the model
 - embraced it as an abstract object model not bibliographic

PCDM - More history

- Whiteboard modeling exercises 2015
- OR 2015
 - Open solicitation of input
 - refined ordering - still in progress but a working approach exists
- Still evolving
- “Portland” - where we met
- “Common Data Model”
 - Because it’s not just Hydra
 - Islandora, Europeana have same data needs
 - History of the naming
 - avoiding baggage
 - neutral model

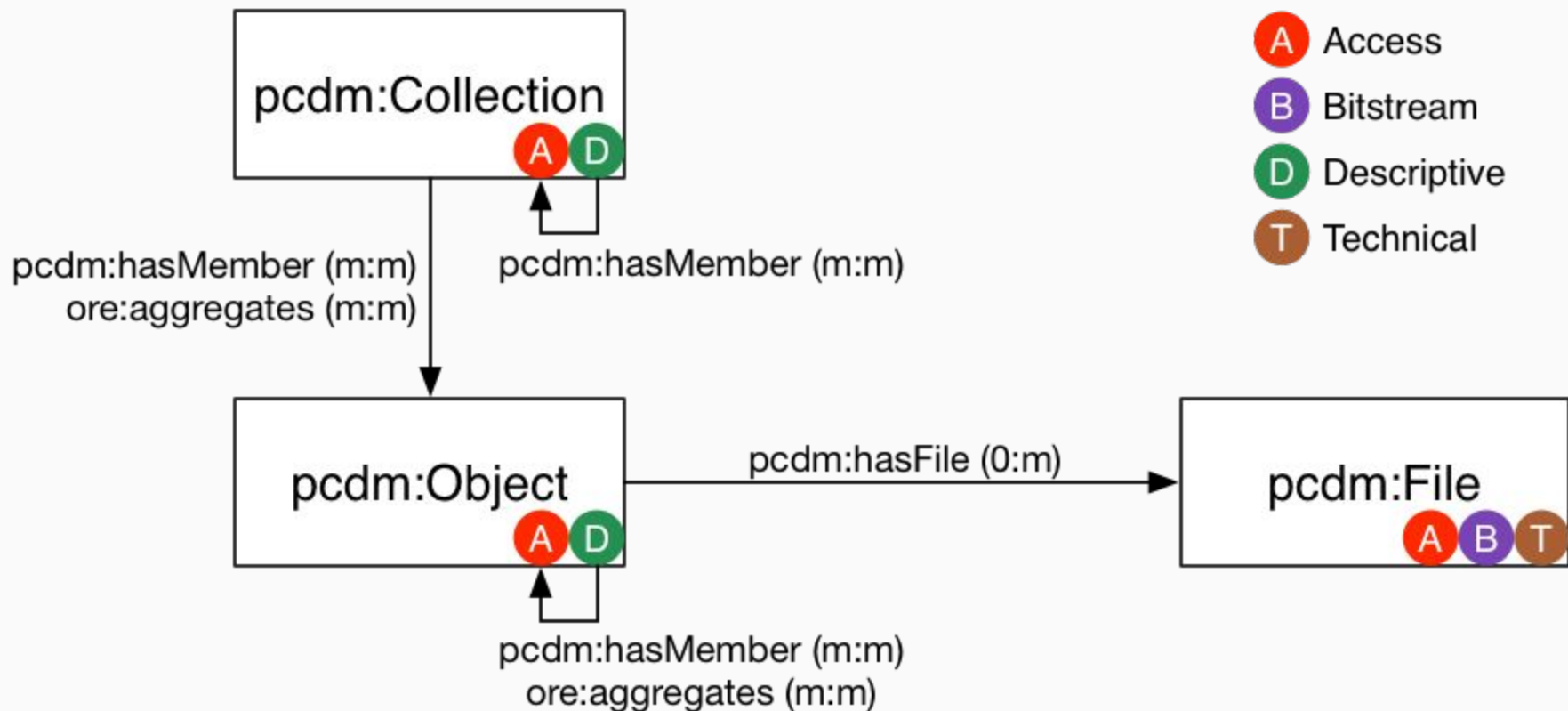
Technical Details - Karen

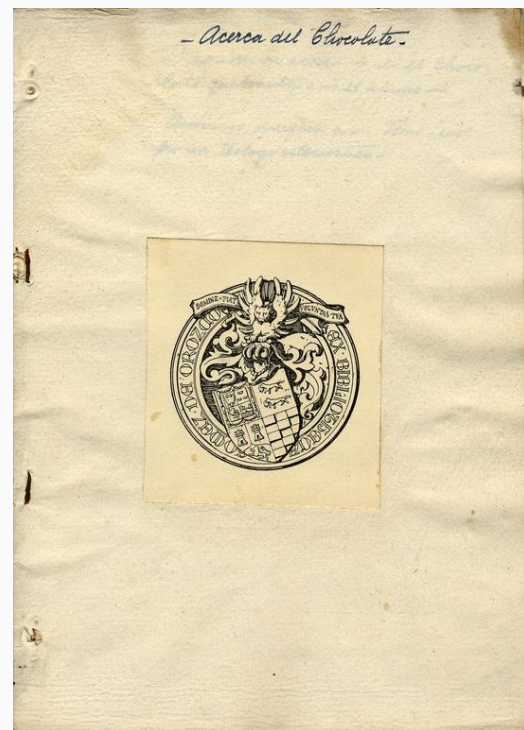
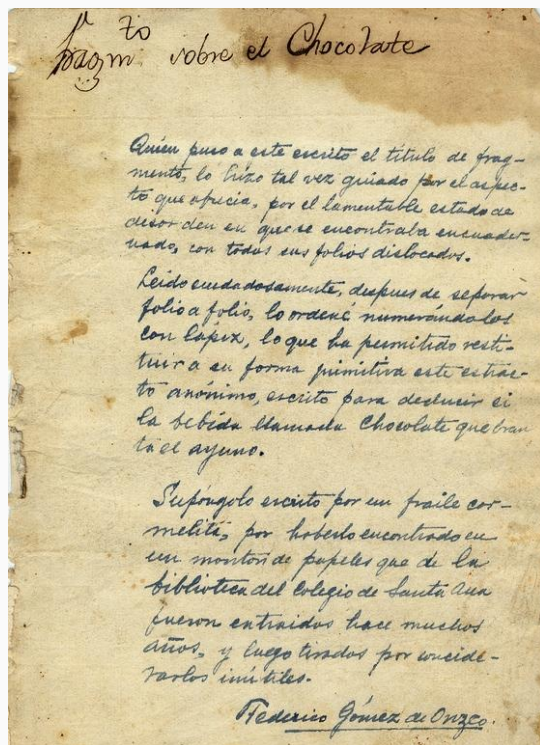
Things

- Collection
- Object
- File

Relationships





- Has Member
- Has File
- Aggregates
- Has Related File





What Can go Where?

...and what can we
say about different
types of things

-  Access
-  Bitstream
-  Descriptive
-  Technical

pcdm:Collection



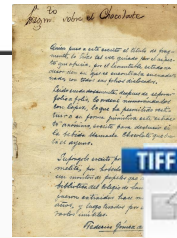
Group A can VIEW

pcdm:Object



Group A can VIEW

pcdm:File



pcdm:File



Acerca del chocolate : Manuscript on chocolate

Catholic Church--Mexico--History--18th century
Cocoa--Therapeutic use--Early works to 1800

ca. 1730



Mandeville Special Collections Library, University of California, San Diego, La Jolla, 92093-0175

<https://libraries.ucsd.edu/ark:/20775/bb3482101x>

2013-11-29T13:56:46-04:00

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Intermediate File

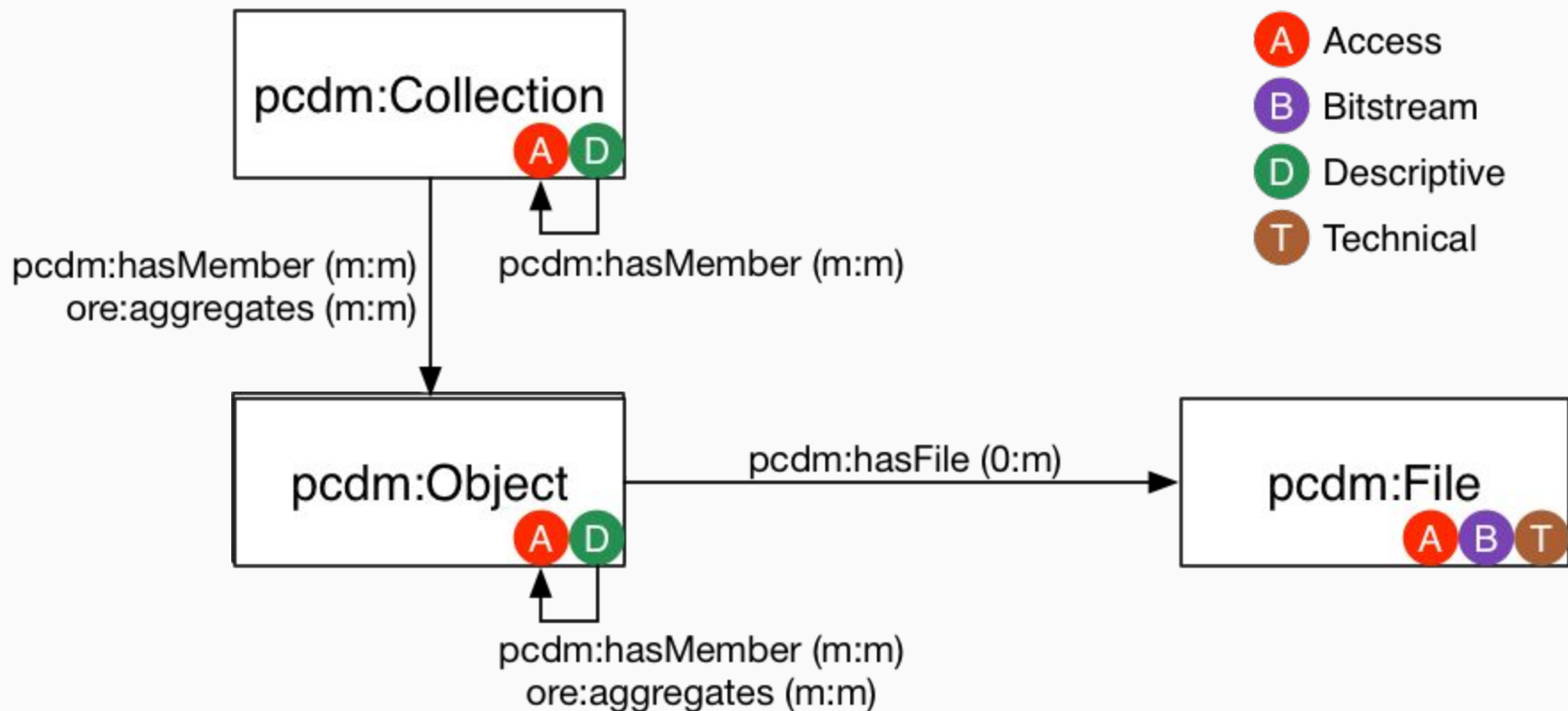


527 KB

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image/tiff

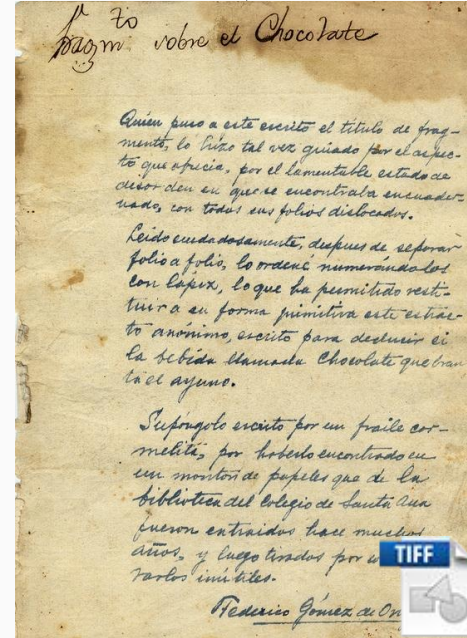


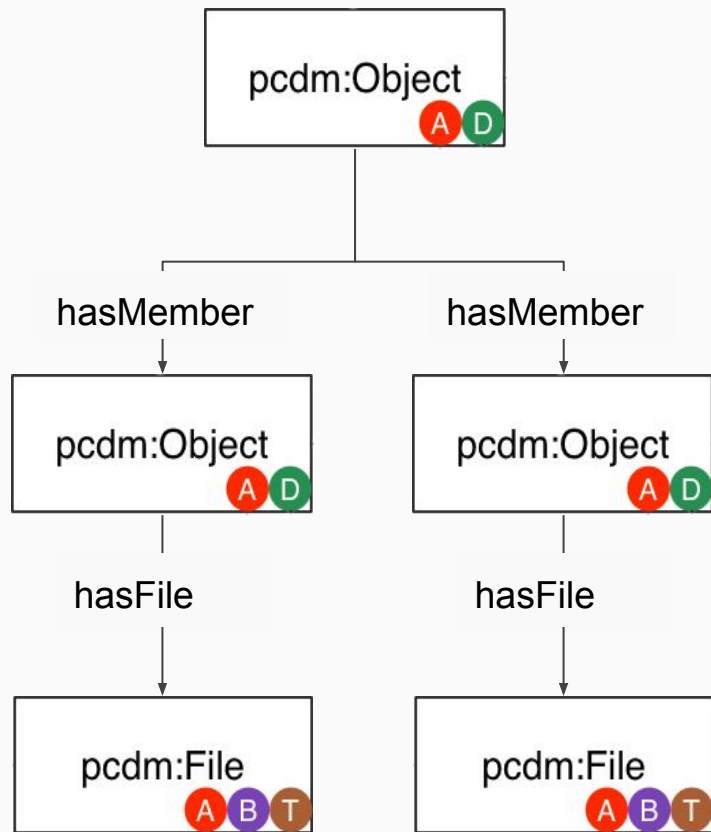


hasFile



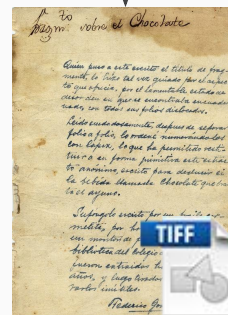
Acerca del chocolate



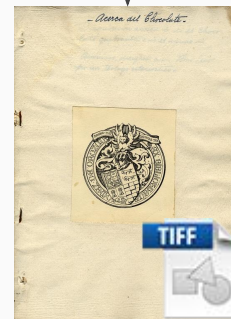


Acerca del chocolate

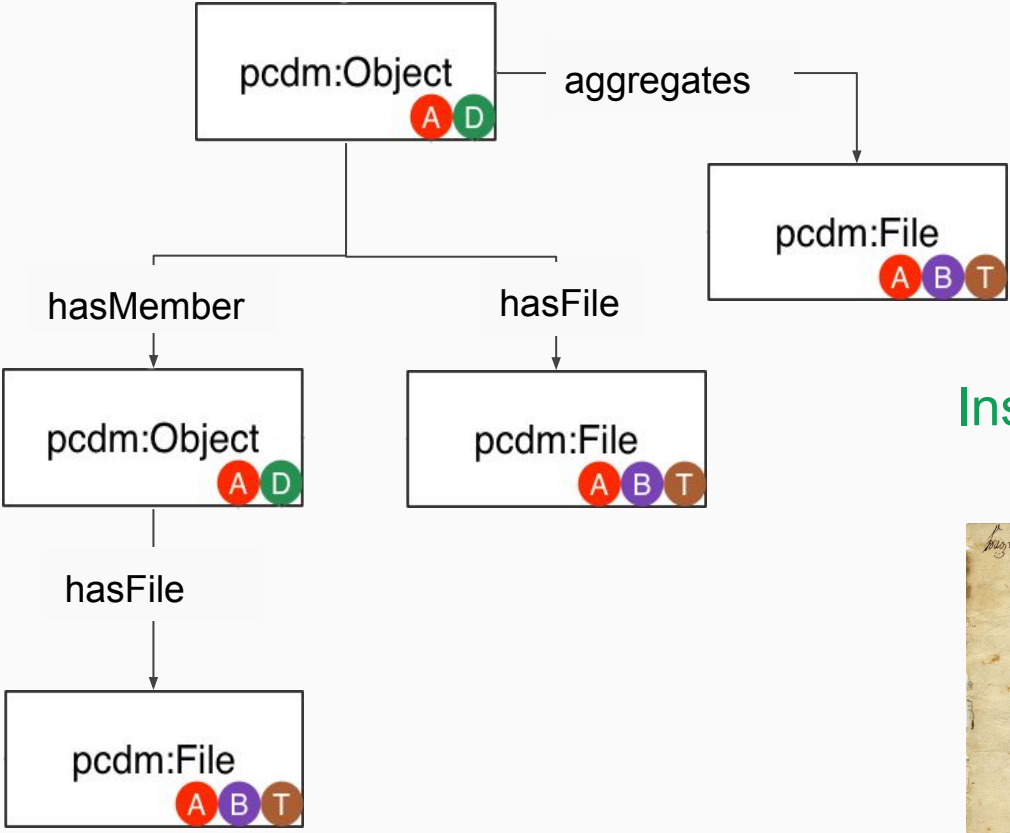
Inscription



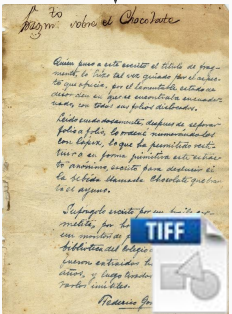
Book Plate



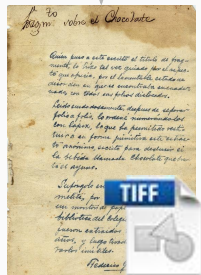
Acerca del chocolate



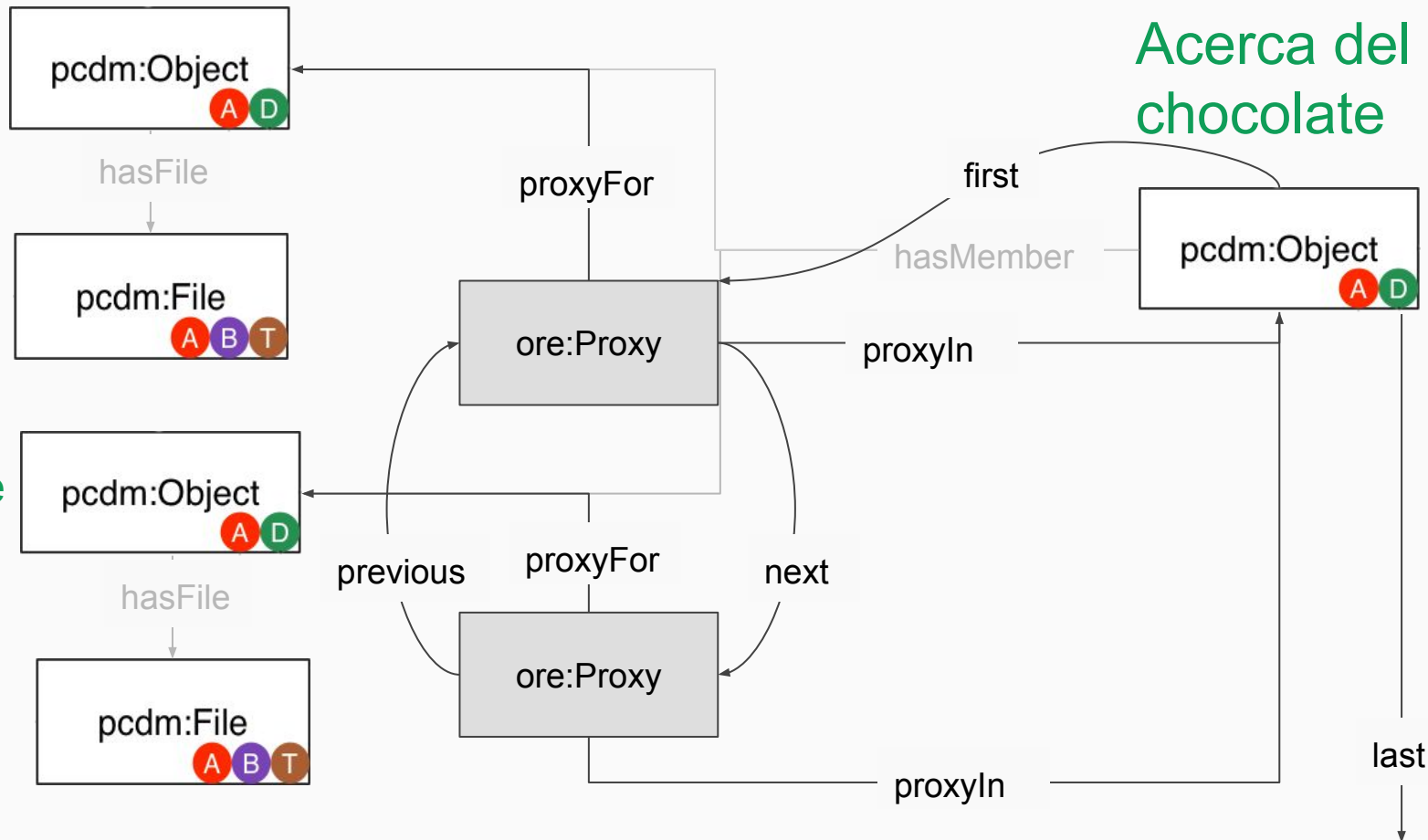
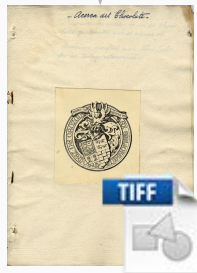
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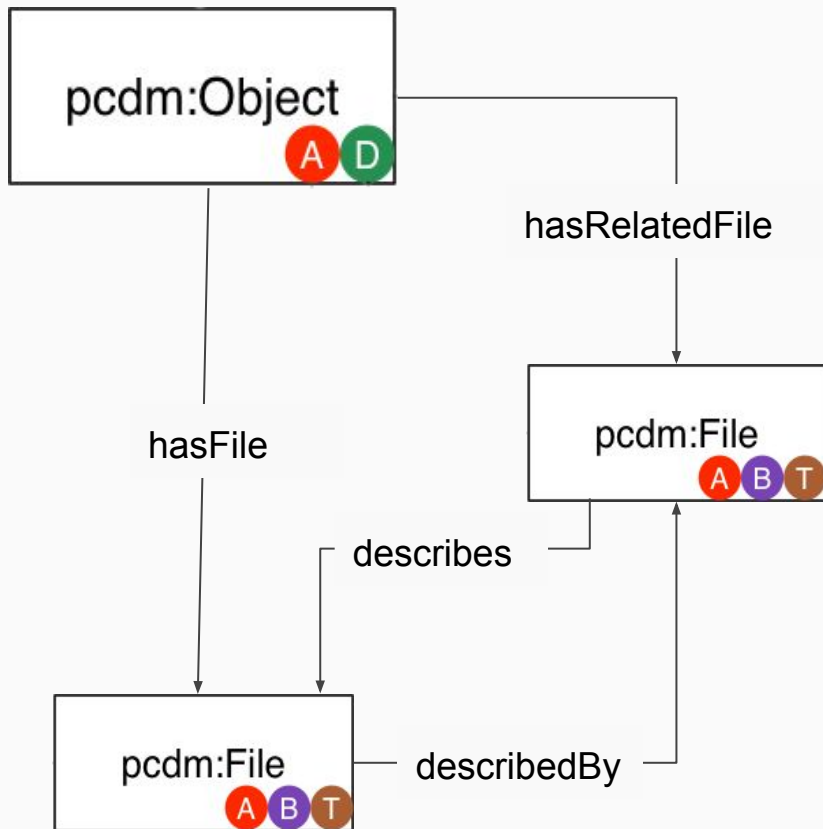


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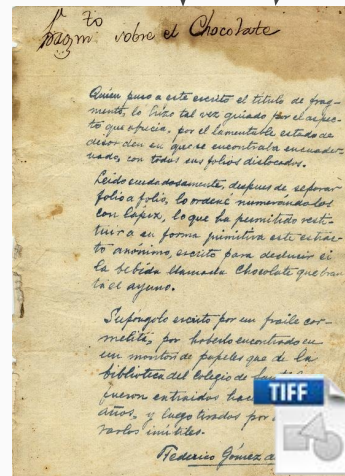


Book Plate





Inscription



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  toolversion="0.8.x">
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      toolversion="1.5"/>
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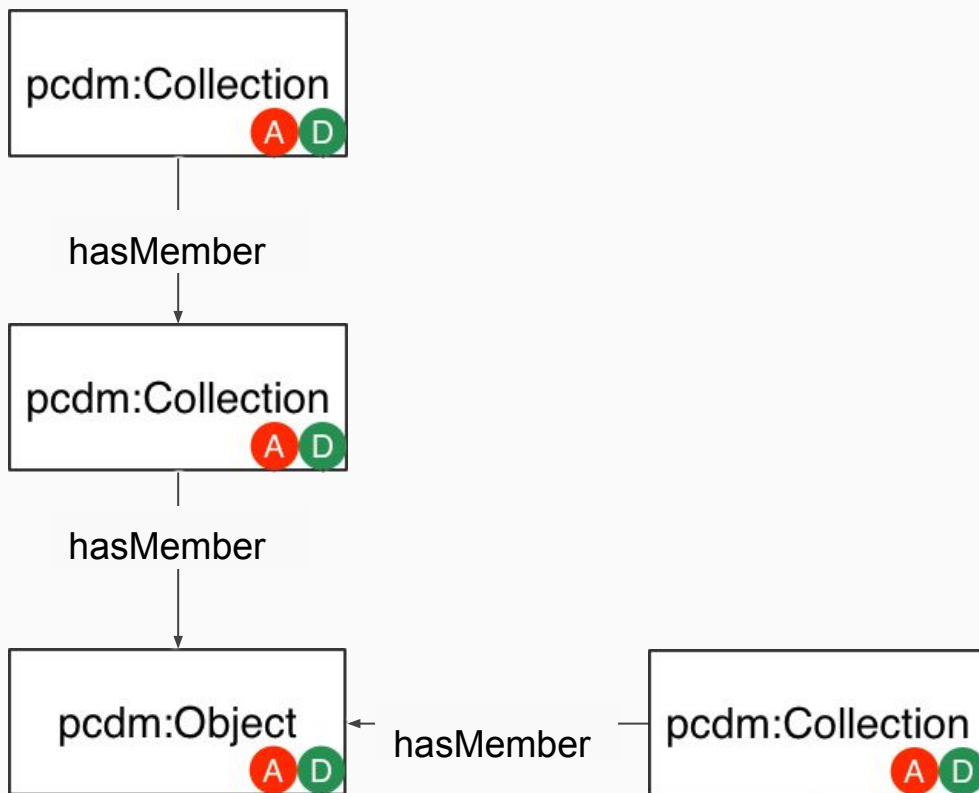


hasMember



18th Century Catholic
Church Medicinal Texts

Acerca del chocolate



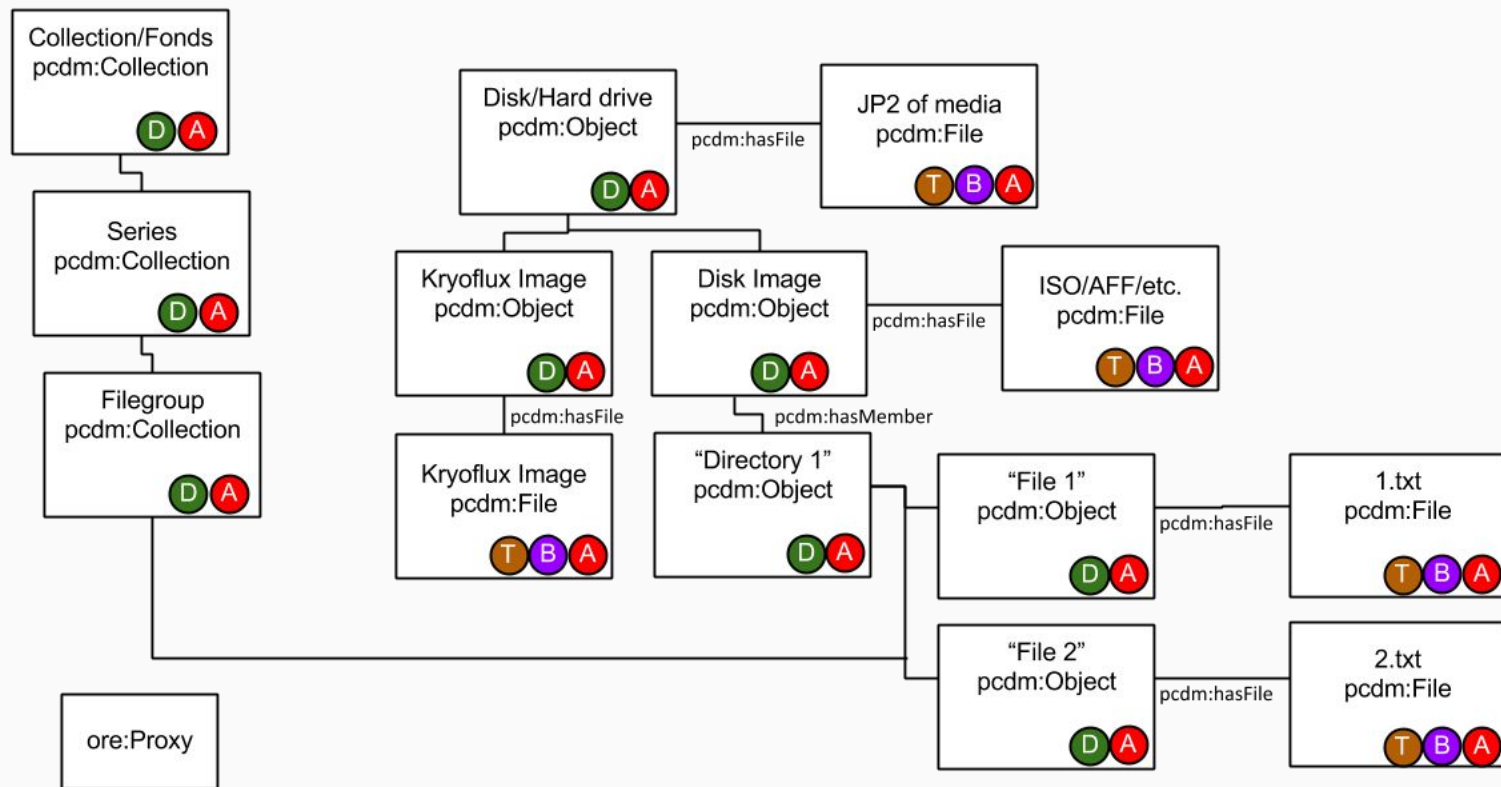
The Catholic
Church in
California

Catholic Church
Health &
Hygiene Texts

Acerca del
chocolate

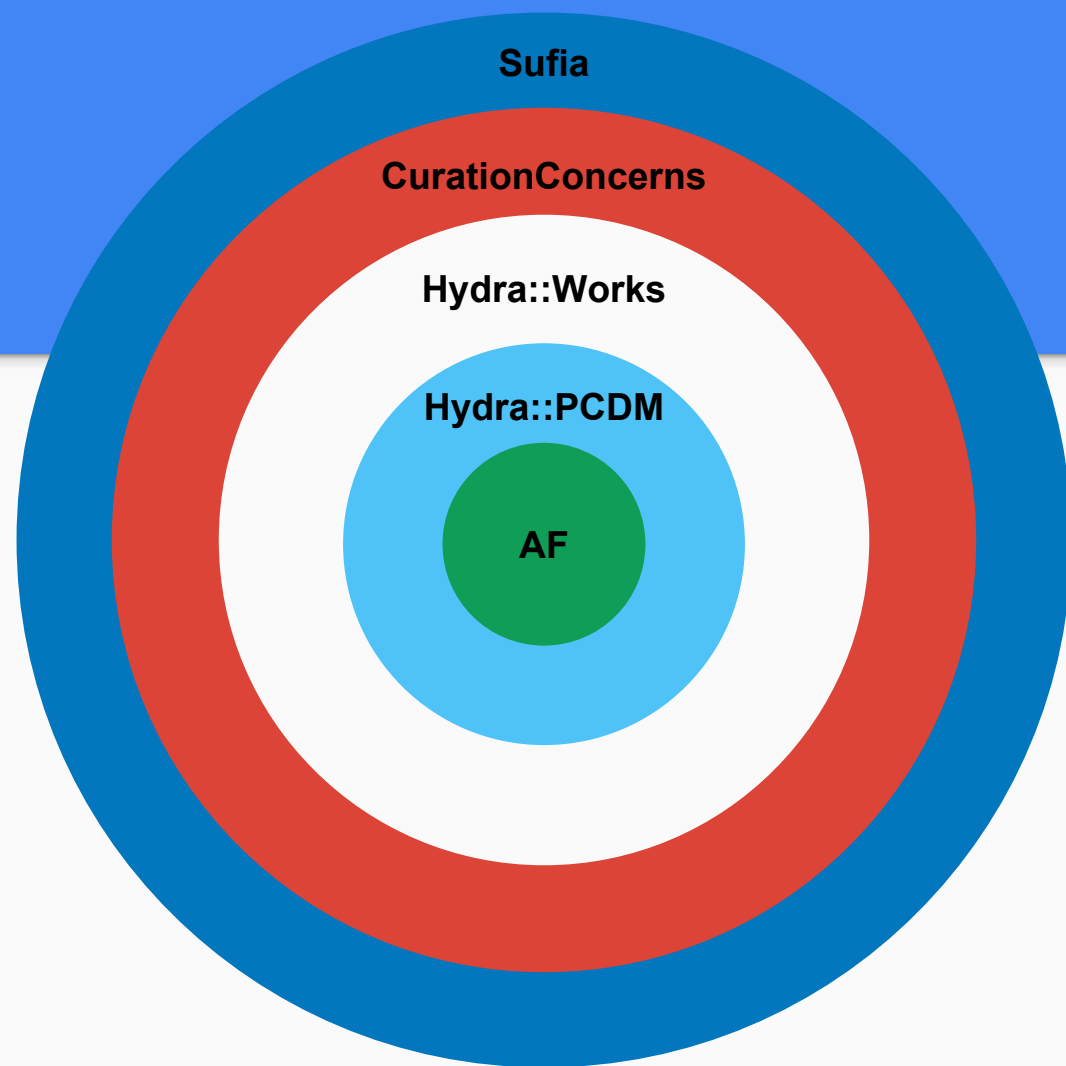
Holograph
Manuscripts

Archival Disk Image example

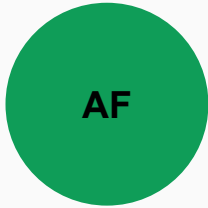


<https://wiki.duraspace.org/display/FF/PCDM+Mappings+-+Reference+Diagrams+for+Comment>

PCDM in Hydra

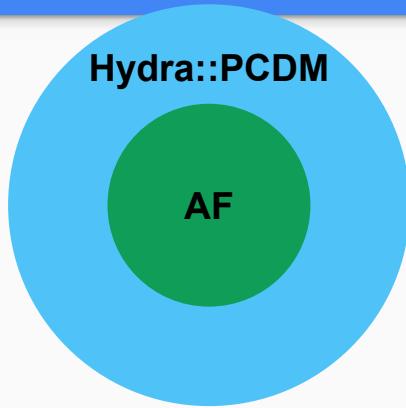


PCDM in Hydra



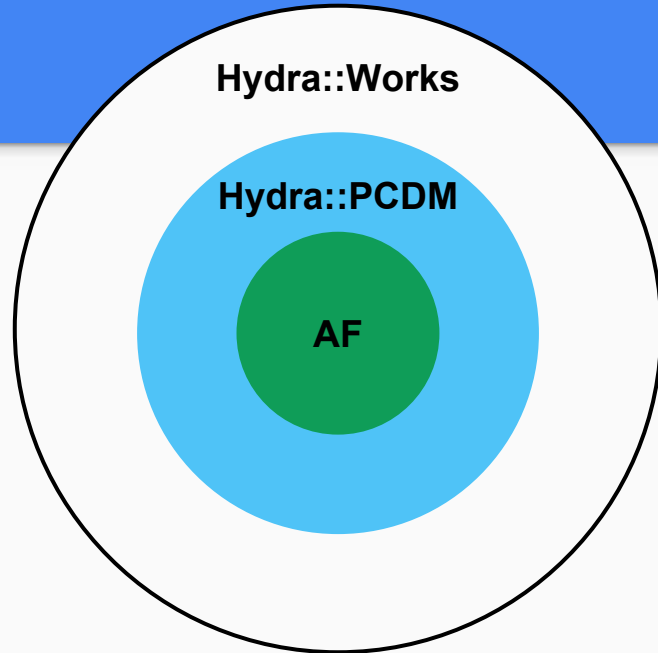
Work with Fedora in a way that
feels like Ruby on Rails

PCDM in Hydra



Build models based on PCDM objects
and relationships

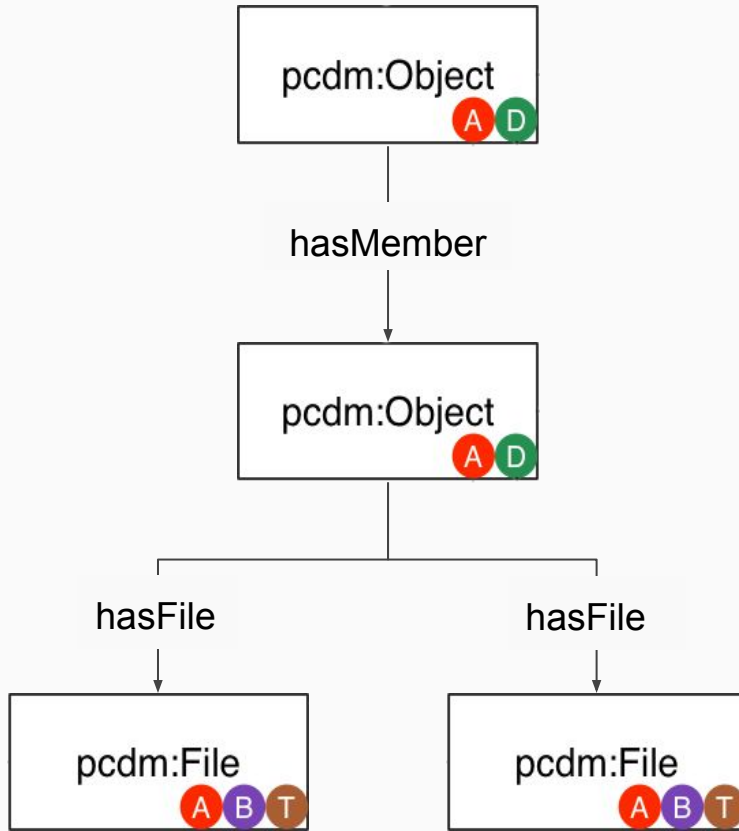
PCDM in Hydra



- Work Objects
- FileSet Objects
- Group FileSets to create Works

This also allows for shared code around::

- Characterization (JHOVE, DROID, etc.)
- Make Derivatives
- Virus Checking
- Text Extraction

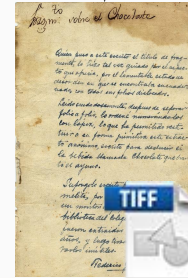


Acerca del chocolate

(Object)

“Page 1”

(Object)

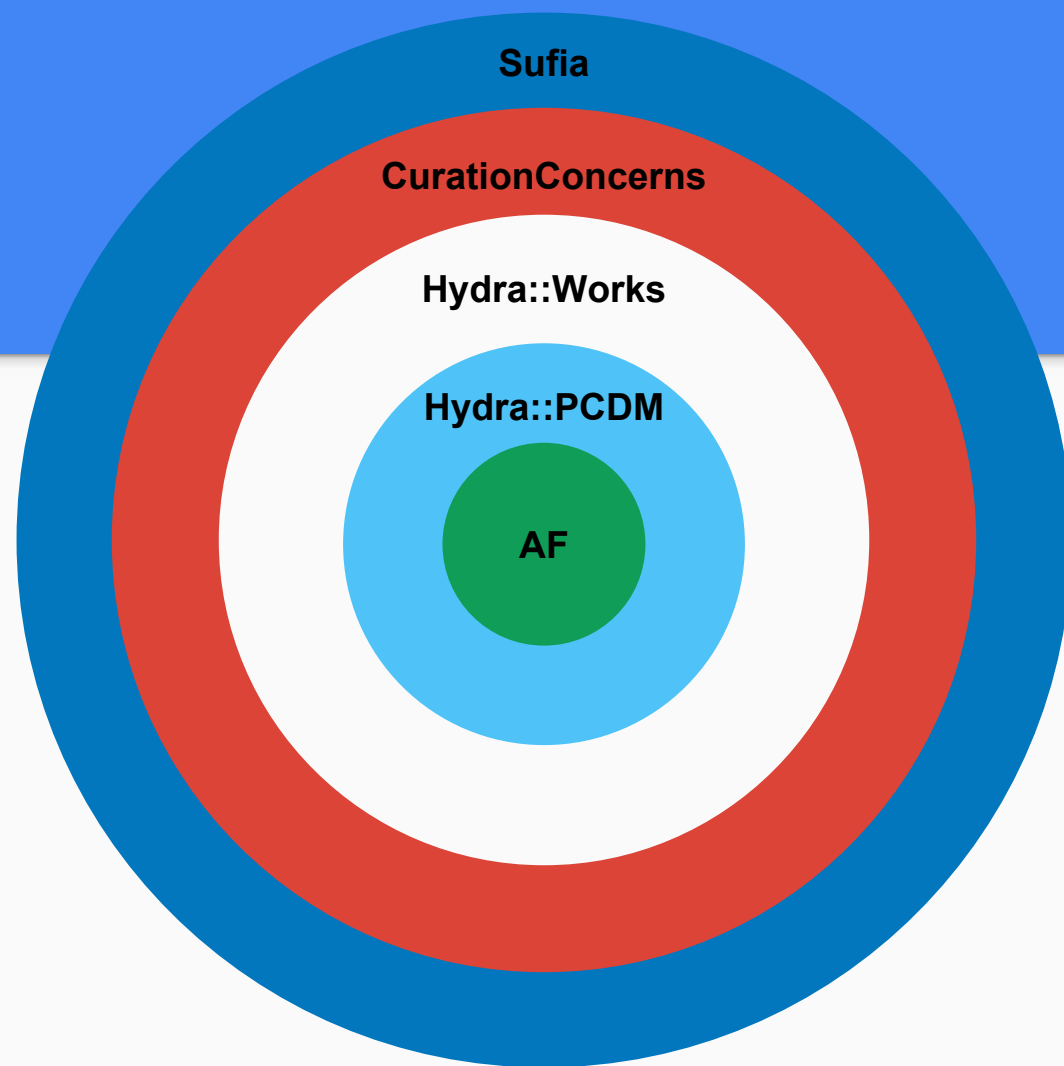


(Master File)



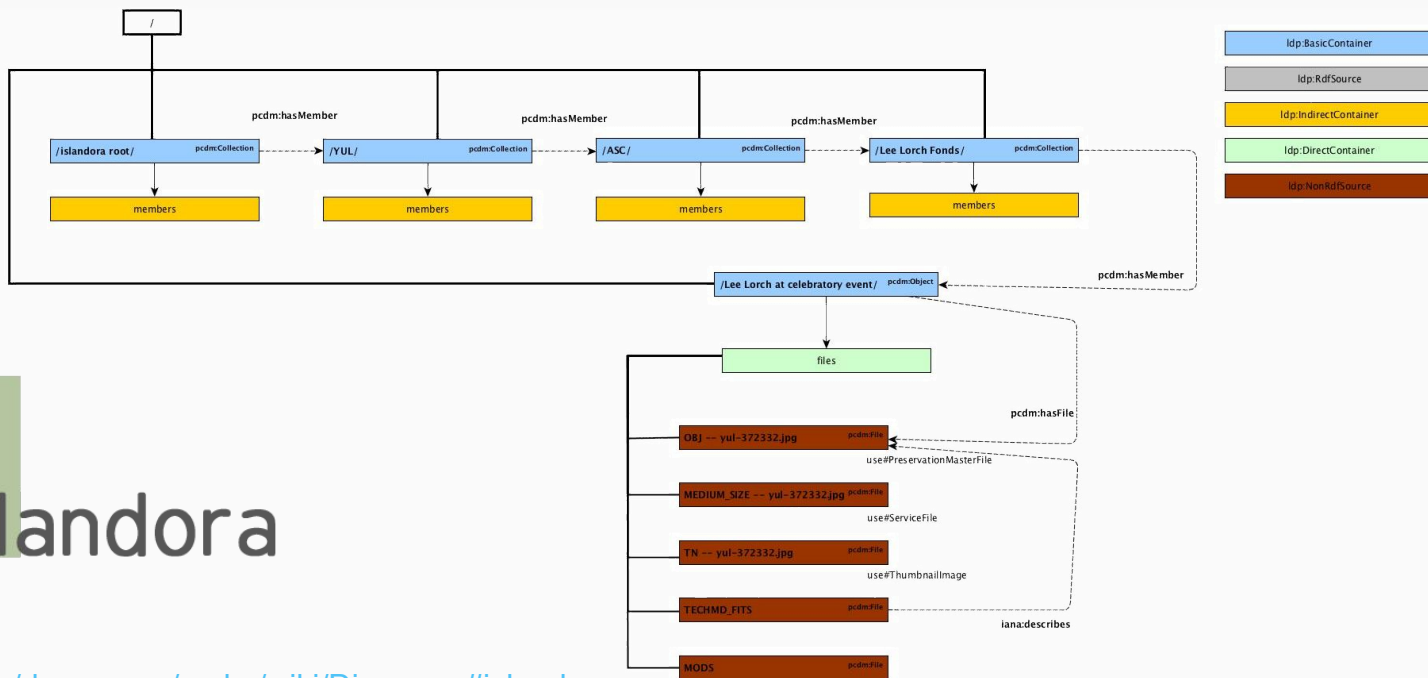
(Thumbnail)

PCDM in Hydra



- Custom Models
- Routing for CRUD
- File Auditing / Versioning
- Single-Use links
- Upload File Sets
- Access Controls
- Leases and Embargoes
- Proxy Deposit
- User Dashboard & Profiles
- Featured Works & Researchers
- Contact Form
- Activity Streams
- Upload via Cloud Providers

PCDM in Islandora

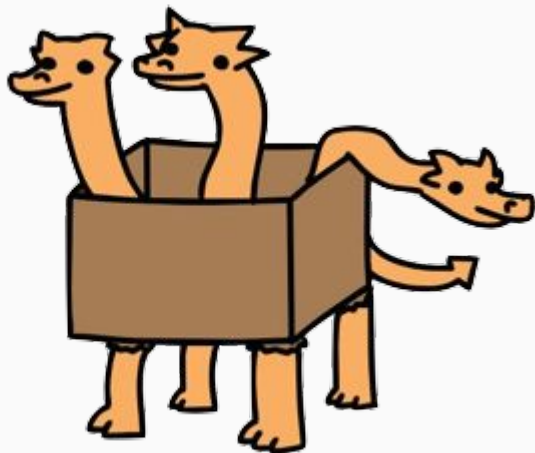


The Future of PCDM

- Within Hydra, Islandora, and Fedora communities
- Interoperability across other communities
- Governance, engagement, and maintenance

The future of PCDM: Within Hydra/Islandora/Fedora communities

- Hydra in a Box



- Use and development of PCDM recommendations & extensions
 - [Rights metadata](#)
 - [Technical metadata](#)
 - File format genre ontology
 - [File use vocabulary](#)

The future of PCDM: Interoperability across communities

- Alignment with/mappings to additional community models
 - [International Image Interoperability Framework](#)
 - [Europeana Data Model](#)
 - [DPLA Metadata Application Profile](#)
 - [RightsStatements.org](#)
- Expansion into W3C standards development processes
 - [Linked Data Platform](#)
 - [WebAccessControl](#)

The future of PCDM: Engagement, governance, and maintenance

- Community engagement beyond the Hydra, Islandora, and Fedora 4 communities
- Determining best venues for sustained community engagement
- Vocabulary management infrastructure
- Identifying the best long-term home for PCDM

How to learn more and get involved

- Visit the PCDM Wiki: <https://github.com/duraspace/pcdm/wiki>
- Join the PCDM Google Group: <https://groups.google.com/d/forum/pcdm>
- Participate in working groups:
 - [Hydra Metadata Interest Group](#)
 - [Islandora Metadata Interest Group](#)
- **Questions for attendees**
 - Where should we go next?
 - What do your communities need?
 - How we can get you more involved?
 - What won't work for you?

Thank you!

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