

# Practical and Conceptual Considerations of Research Object Preservation

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**SEAD**

Sustainable Environment  
Actionable Data



# Data Preservation Challenges

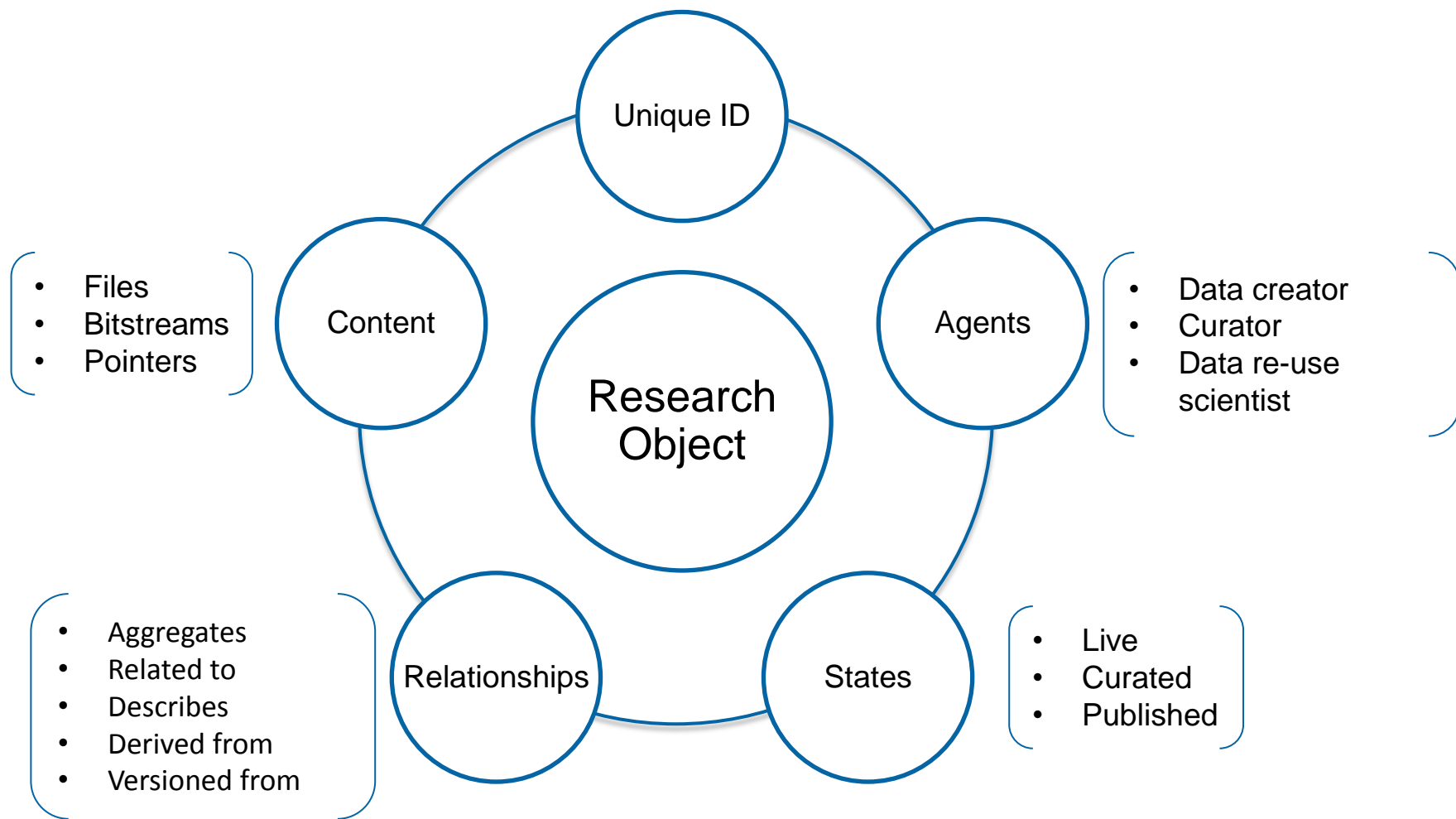
- Research spans over **months** or **years**
- Data are **heterogeneous** and complex
- Data changes **states** through collection, processing, analysis and publication
- **Processes** are as important as products
- Multiple **agents**, including individuals and organizations, are involved
- People, processes and products are in **non-linear relationships**

Capture and formalize for automation, reproducibility and re-use?



# Research Object Framework

Bundles of resources that use common standards and services to transfer and consume them





# Research Object States

## **Live Objects**

- In a state of flux
- Handled by members of the project team
- Transition initiated by intent to publish

## **Curation Objects**

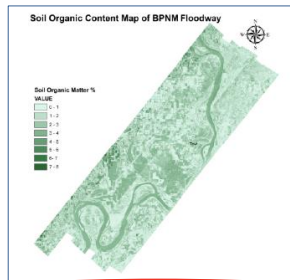
- Content packaged using BagIT protocol
- Metadata and relationships captured via OAI/ORE maps
- Mutable, but changes are selective (metadata)

## **Publication Objects**

- Immutable and citable (DOI)
- Deposited using the best match algorithm
- Lineage (revisions and derivations) is tracked



# Working with Live Objects



[Download](#) [Embed](#) [Upload Derived Data](#)

## Collection Context

## User Specified Information

Field	Value	Applies To	Action
Contact	Tallant, Jason	Document	<a href="#">Edit</a> <a href="#">Remove</a> <a href="#">Search</a>
Has Description	Temperature and precipitation data for the month of August (1912-present) for the University of Michigan Biological Station.	Document	<a href="#">Edit</a> <a href="#">Remove</a> <a href="#">Search</a>
Location Name	University of Michigan Biological Station	Document	<a href="#">Edit</a> <a href="#">Remove</a> <a href="#">Search</a>

Add Field

## Extracted Information

## Info

Creator(s):

Filename: AVIRISSOMmap.tif

Size: 44.88 MB

Category: Image

MIME Type: image/tiff

Uploaded By: Debsunder Dutta

Uploaded: 2013-04-03 14:23

Image Size : 3400x4400

## Data Maturity

Current level:

## License

All Rights Reserved

## Social

Viewed by 10 people

Downloaded by 1 people



# Curation and Publishing

Resources Partners Upload Data **Curate** Activity Data Ingest Monitor

## Curation Objects Review for Indiana University

Research Object Name	Date Last Modified	Current Assignment	Modify Assignment	Edit	Publish
1_angelo_reserve_quads	Sun Jun 29 07:52:07 EDT 2014	No one	<input type="button" value="Assign to me"/>	<input type="button" value="Edit"/>	<input type="button" value="Publish"/>
2_vortex_2_mining	Sun Jun 29 07:52:34 EDT 2014	No one	<input type="button" value="Assign to me"/>	<input type="button" value="Edit"/>	<input type="button" value="Publish"/>
4_SES_notes	Sun Jun 29 07:52:56 EDT 2014	You	<input type="button" value="Unassign"/>	<input type="button" value="Edit"/>	<input type="button" value="Publish"/>

### Research Object Metadata




Title

Abstract

### Research Object Content

To edit, click on entities below

▼  4\_SES\_notes

-  IAD-SES notes.docx
-  SES framework case studies comparison.xlsx
-  \_readme.txt



# Broader Implications

- RO concept and its implementation in SEAD allows us to document content, context, processes, states
- Entities can be edited on multiple levels
- ROs can be deposited to institutional repositories, cloud storage, domain repositories
- **Needed:**
  - multiple licensing and permissions (to address diverse models of RO ownership)
  - sophisticated lineage tracking (to build trust, authority and authenticity)
  - cases of re-use (to create better tools and services)

# Thank you

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IU Scholarworks

