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# Making Interoperability Easier: Creating Shareable Metadata

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# What does this record describe?

*Dublin Core record retrieved  
via the OAI Protocol*

- identifier:** [http://name.university.edu/IC-FISH3IC-X0802\]1004\\_112](http://name.university.edu/IC-FISH3IC-X0802]1004_112)
- publisher:** Museum of Zoology, Fish Field Notes
- format:** jpeg
- rights:** These pages may be freely searched and displayed. Permission must be received for subsequent distribution in print or electronically.
- type:** image
- subject:** 1926-05-18; 1926; 0812; 18; Trib. to Sixteen Cr. Trib. Pine River, Manistee R.; JAM26-460; 05; 1926/05/18; R10W; S26; S27; T21N
- language:** UND
- source:** Michigan 1926 Metzelaar, 1926--1926;
- description:** Flora and Fauna of the Great Lakes Region

Orig. No. 460 Sta. No. ....

Locality Michigan: Trib. to sixteen cr., Sec. 26-27,  
T. 21N. R. 10W., Wexford Co.

Trib. Pine River → Mainstem

Water: mostly spring-fed; clear, spring floods rather  
some surface rather bad.

Vegetation: not much at absolutely nothing

Bottom: sand; no mud, rather deep. Temp. 47° air 62°

Shore: mostly cleared → farms & some brush Current: ~~ft~~

Distance from shore: across width 4 ft Tide: .....

Depth of capture: ..... Depth of water: 6 in! ft.

Method of capture: ..... Date: V: 18: 1926

Collected by Metzger ..... Time: .....

Orig. preserv. ....

Animal life subnormal

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# Why share metadata?

- Benefits to users
  - One-stop searching
  - Aggregation of subject-specific resources
- Benefits to institutions
  - Increased exposure for collections
  - Broader user base
  - Bringing together of distributed collections

**Don't expect users will know about your collection and remember to visit it.**

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# Types of aggregations

- “Traditional” aggregations
  - [WorldCat](#)
  - [RLG Cultural Materials](#)
  - [CIC Metadata Portal](#)
- Newly emerging aggregations
  - [A9](#)

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# Finding the right balance

- Metadata providers know the materials
  - Document encoding schemes and controlled vocabularies
  - Document practices
  - Ensure record validity
- Aggregators have the processing power
  - Format conversion
  - Reconcile known vocabularies
  - Normalize data
  - Batch metadata enhancement

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# Shareable metadata defined

- Promotes search interoperability - “the ability to perform a search over diverse sets of metadata records and obtain meaningful results” (Priscilla Caplan)
- Is human understandable outside of its local context
- Is *useful* outside of its local context
- Preferably is machine processable

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# Sarah Shreeves' 4 Cs and lots of Ss of shareable metadata

**Consistency**  
**Coherence**  
**Context**  
**Conformance**

**Metadata standards**  
(and not just DC)

**Vocabulary and encoding standards**

**Descriptive content standards**  
(AACR2, CCO, DACS)

**Technical standards**  
(XML, Character encoding, etc)



# Appropriate representation of the resource through shareable metadata

- Metadata as a *view* of the resource
- Standards promote interoperability
- Appropriate formats
- Appropriate content
- Appropriate context

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# Metadata as a *view* of the resource

- There is no monolithic, one-size-fits-all metadata record
- Metadata for the same thing is different depending on *use* and *audience*
- Affected by format, content, and context
- Harry Potter as represented by...
  - a public library
  - an online bookstore
  - a fan site

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# Choice of vocabularies as a *view*

## ■ Names

- LCNAF: Michelangelo Buonarroti, 1475-1564
- ULAN: Buonarroti, Michelangelo

## ■ Places

- LCSH: Jakarta (Indonesia)
- TGN: Jakarta

## ■ Subjects

- LCSH: Neo-impressionism (Art)
- AAT: Pointillism

# Standards promote interoperability



http://digital.library.ucla.edu - Sheet Music OAI Service Provider Item Display - Microsoft...  
Sheet Music Consortium Hosted by UCLA  
You are not logged in

- Title : **Anaconda Two-Step. Souvenir Brockton Fair 1901.**  
Creators : By Sylvester B. Grant.  
Fisher  
Publisher : Brockton, Mass.: Compliments of Old Colony Piano Co., 4 Main St.  
Date : 1901  
Subjects : Horses  
Horse racing  
Description : Respectfully Dedicated to Mrs. A.E. Rice, Boston, Mass.  
ads on back cover for Old Colony Piano Co.  
Source : Johns Hopkins University, Lew Sheet Music Collection, Box 028, Item 003  
Collection : Johns Hopkins University Lewy Collection  
Add a Note :   
 - add/edit a note for this record  
[\[ access online \]](#)  - add to virtual collection

http://digital.library.ucla.edu - Sheet Music OAI Service Provider Item Display - Microsoft...  
Sheet Music Consortium Hosted by UCLA  
You are not logged in

- Title : **Anaconda : two-step for piano**  
Creators : Grant, Sylvester B. [composer]  
Fisher, F.  
Publisher : New York : Old Colony Piano Co.  
Date : c1901  
Subjects : Piano music  
Type : Sheet music  
Description : For piano  
At head of title: Souvenir Brockton Fair 1901. Respectfully dedicated to Mrs. A. E. Rice, Boston, Mass  
Illustration by F. Fisher  
Includes publisher's advertising  
Source : Lilly Library (Indiana University, Bloomington) Starr Sheet Music Collection.  
Call number: M1 .S8 II Animals Horses  
Relation : [IsPartOf http://www.indiana.edu/~liblilly/starr.shtml](http://www.indiana.edu/~liblilly/starr.shtml)  
Rights : <http://purl.dlib.indiana.edu/iudl/lilly/starr/rights>  
Collection : Indiana University  
Add a Note :

# Types of standards to consider

- Data structure standards
  - “Buckets” of information (fields)
  - Both label and scope important
  - e.g., MARC, MODS, Dublin Core
- Data content standards
  - Selection, structure and formatting of value within a field
  - e.g., AACR2, DACS, CCO

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# Appropriate formats

- Depends upon:
  - nature of materials and holding institution
  - depth of description needed
  - community practice
  - relationships between multiple versions
  - need for repeating elements
  - technical environment
- MARC, MODS, Dublin Core, EAD, and TEI may all be appropriate for a single item
- High-quality metadata in a format not common in your community of practice is not shareable

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# Appropriate content

- Choose appropriate vocabularies
- Choose appropriate granularity
- Make it obvious what to display
- Make it obvious what to index
- Exclude unnecessary “filler”
- Make it clear what links point to

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# Common content mistakes

- No indication of vocabulary used
- Shared record for a single page in a book
- Link goes to search interface rather than item being described
- “Unknown” or “N/A” in metadata record



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# Appropriate context

- Thinking about shareability
  - Explicitly include information assumed locally
  - Exclude information *only* used locally
- Current safe assumptions
  - Users discover material through shared record
  - User then delivered to your environment for full context
- Context driven by intended use

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# Common context mistakes

- Leaving out information that applies to an entire collection (“On a horse”)
- Location information lacking parent institution
- Geographic information lacking higher-level jurisdiction
- Inclusion of administrative metadata

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# Communication

- Metadata providers can learn from aggregators
- Aggregators can learn from metadata providers
- Providing supplemental information to make records more intelligible

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# Metadata providers can learn from aggregators

- Crosswalking methods and rules
- Information to include and exclude
- Choice of standards
  - metadata formats
  - vocabularies
- Where to spend normalization effort
- Future priorities [[example](#)]

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# Aggregators can learn from metadata providers

- Where to spend normalization effort
- Context, importance, and primary uses of resources shared
- Variety of resource types and descriptive practices encountered
- Local, robust metadata formats

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# Providing supplemental information to make records more intelligible

- Method for creating shared records
- Vocabularies and content standards used in shared records
- Record updating practices and schedules
- Accrual practices and schedules
- Existence of analytical or supplementary materials
- Provenance of materials

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# Before you share...

- Check your metadata
  - Appropriate view?
  - Consistent?
  - Context provided?
  - Does the aggregator have what they need?
  - Documented?

**Can a stranger tell you what the record describes?**

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# Final thoughts

- Creating shareable metadata requires thinking outside of your local box
- Creating shareable metadata will require more work on your part
- Creating shareable metadata is no longer an option, it's a requirement



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# For more information

- Stay tuned for a potential IMLS-funded shareable metadata training program
- [jenlrile@indiana.edu](mailto:jenlrile@indiana.edu)
- These presentation slides:  
<<http://www.dlib.indiana.edu/~jenlrile/presentations/bbspr06/shareableMetadata/>>

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