Online Training Conference

DIGITAL DIRECTIONS

Fundamentals of Creating and Managing Digital Collections

PRESENTED BY NEDCC

Session 6.2:
Metadata Basics

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www.nedcc.org   Tuesday, 11/16/2021

DISCLAIMER:
SERIOUSLY, THE VERY META-BASICS OF METADATA

"the metadata is the law"

or

data?   metadata?

metadata is more what you'd call guidelines than actual rules.
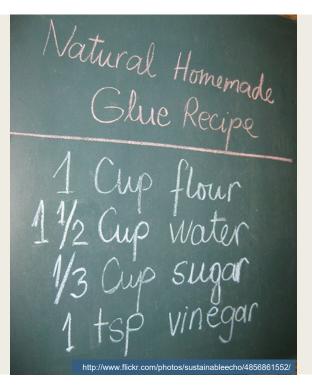

Why Metadata?

"…because metadata is the glue that binds it all together."

Nelson Mattos, IBM

"Everything should be made as simple as possible, but not one bit simpler."

Albert Einstein, attributed

Natural Homemade Glue Recipe
1 Cup flour
1½ Cup water
⅓ Cup sugar
1 tsp vinegar

http://www.flickr.com/photos/sustainableecho/4856861552/

OBJECT NAME
measuring cup

- ID NUMBER
  2001.0253.0284

- CATALOG NUMBER
  2001.0253.0284

- ACCESSION NUMBER
  2001.0253

OBJECT NAME
measuring cup

- PHYSICAL DESCRIPTION
  glass (overall material)

- MEASUREMENTS
  overall: 9 cm x 13 cm;
  3 9/16 in x 5 1/8 in

- SUBJECT
  Measuring & Mapping

- SEE MORE ITEMS IN
  Home and Community Life:
  Occupations

OBJECT NAME
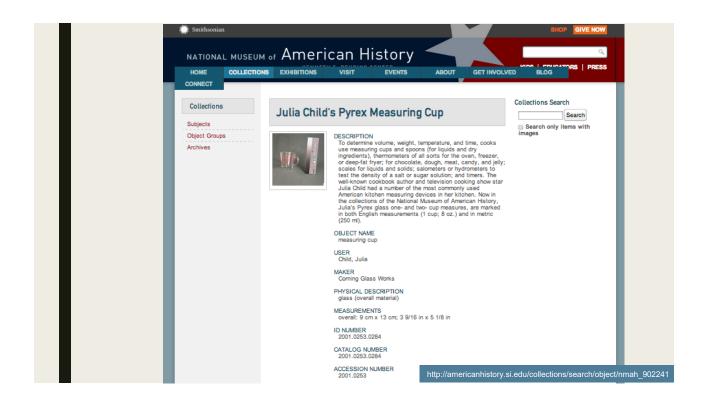## measuring cup
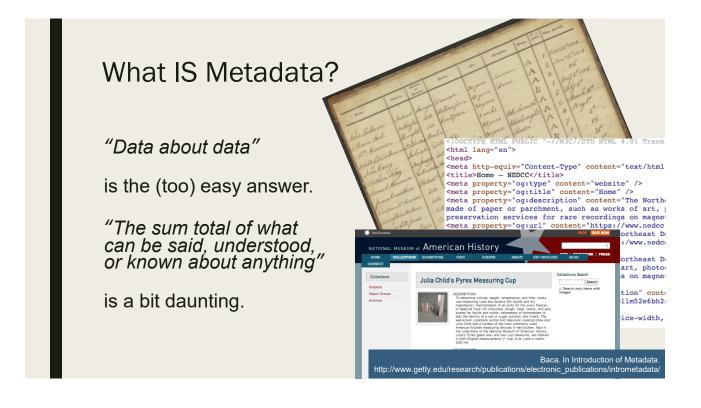
- MAKER
  Corning Glass Works

This Photo by Unknown Author is licensed under CC BY-SA

OBJECT NAME
measuring cup

- MAKER
  Corning Glass Works

- USER
  Child, Julia

Look! It's Metadata!

BE META EDUCATED

What IS Metadata?

"Data about data"

is the (too) easy answer.

"The sum total of what can be said, understood, or known about anything"

is a bit daunting.

Baca. In Introduction of Metadata.
http://www.getty.edu/research/publications/electronic_publications/intrometadata/

Metadata: Many Sources, Many Ways

"any…resource may have **multiple metadata records** reflecting **differing purposes** and **perspectives**…

…be created with **embedded metadata** supplied by the author, may also be **associated** with a **separated record…**

... may have yet another version of metadata **created by a third party such as a library**..."
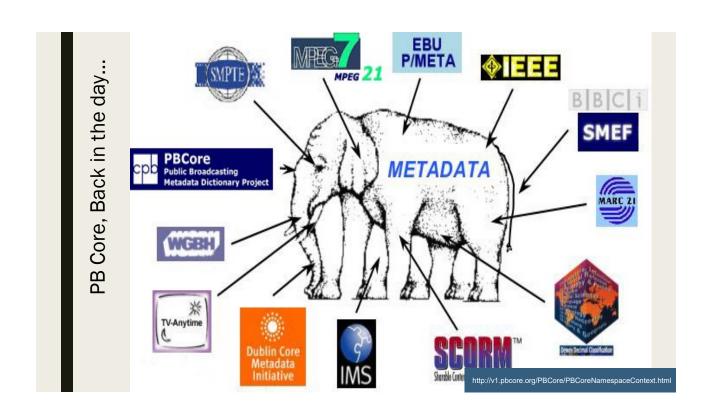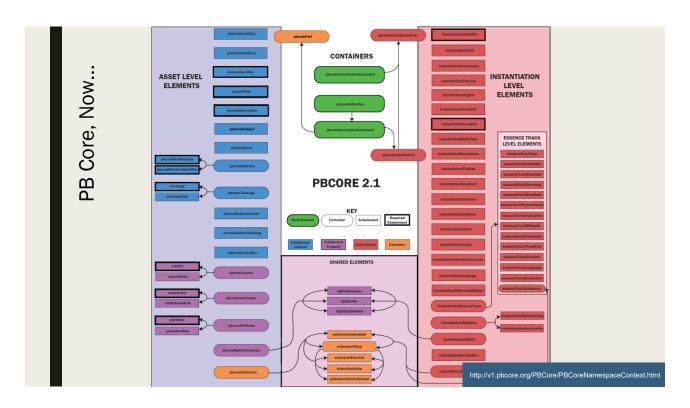
Erik Duval, 2004

Metadata supports…

- ✓ Increased accessibility
- ✓ Retention of context
- ✓ Expanding use
- ✓ Learning experience
- ✓ Rights management
- ✓ Preservation

- ✓ System development and enhancement
- ✓ System improvements and economics
- ✓ Versioning
- ✓ Legal issues

Setting the Stage. A. Gilliland. In Introduction to Metadata. ed. Murtha Baca
URL:http://www.getty.edu/research/publications/electronic_publications/intrometadata/setting.html

PB Core, Back in the day…

http://v1.pbcore.org/PBCore/PBCoreNamespaceContext.html

PB Core, Now…

http://v1.pbcore.org/PBCore/PBCoreNamespaceContext.html

"Basic" Metadata

Administrative	• managing and administering
Descriptive	• identify and describe
Technical	• how a system functions or behaves
Preservation	• level and type of use
Structural	• mark-up languages
Use	• reuse and versioning • rights management

Setting the Stage. A. Gilliland. In Introduction to Metadata. ed.Murtha Baca
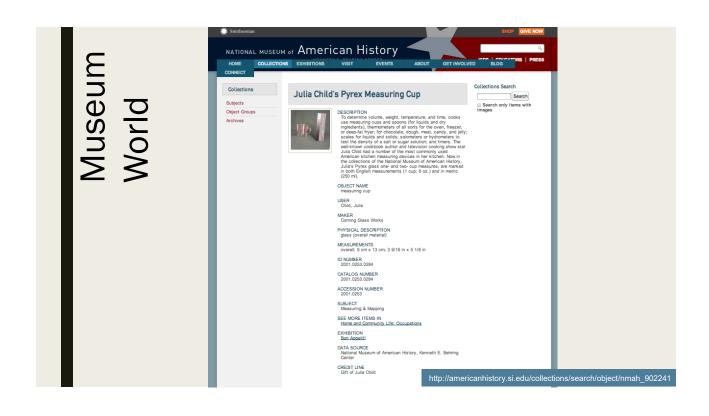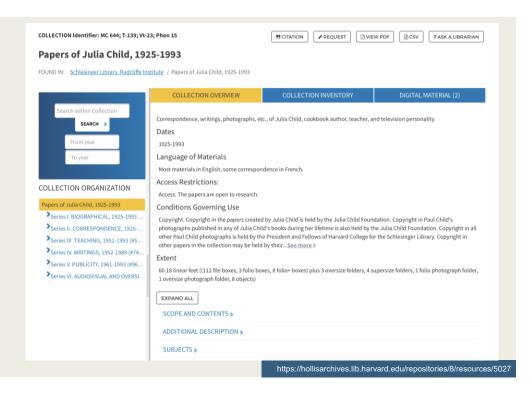URL:http://www.getty.edu/research/publications/electronic_publications/intrometadata/setting.html

Principles of GOOD Metadata, in

A Framework of Guidance for Building Good Digital Collections

3rd edition
December 2007

A NISO Recommended Practice

Prepared by the
NISO Framework Working Group
with support from the
Institute of Museum and Library Services

Conforms to community standards	Is appropriate to the materials in the collection, users of the collection, and current and potential future uses of the collection
Supports interoperability	Uses authority control and content standards
Includes a clear statement of the conditions and terms of use for the digital object	Supports the long-term curation and preservation of objects in collections

A Framework of Guidance for Building Good Digital Collections.
URL: http://framework.niso.org

Museum World

http://americanhistory.si.edu/collections/search/object/nmah_902241

Library World

https://hollis.harvard.edu/primo-explore/fulldisplay?context=L&vid=HVD2&search_scope=everything&tab=everything&lang=en_US&docid=01HVD_ALMA211768182610003941

Archives World

COLLECTION Identifier: MC 644; T-139; Vt-23; Phon 15

Papers of Julia Child, 1925-1993

FOUND IN: Schlesinger Library, Radcliffe Institute / Papers of Julia Child, 1925-1993

| COLLECTION OVERVIEW | COLLECTION INVENTORY | DIGITAL MATERIAL (2) |

Correspondence, writings, photographs, etc., of Julia Child, cookbook author, teacher, and television personality.

Dates

1925-1993

Language of Materials

Most materials in English; some correspondence in French.

Access Restrictions:

Access. The papers are open to research.

Conditions Governing Use

Copyright. Copyright in the papers created by Julia Child is held by the Julia Child Foundation. Copyright in Paul Child's photographs published in any of Julia Child's books during her lifetime is also held by the Julia Child Foundation. Copyright in all other Paul Child photographs is held by the President and Fellows of Harvard College for the Schlesinger Library. Copyright in other papers in the collection may be held by their...See more >

Extent

60.18 linear feet ((112 file boxes, 3 folio boxes, 8 folio+ boxes) plus 3 oversize folders, 4 supersize folders, 1 folio photograph folder, 1 oversize photograph folder, 8 objects)

EXPAND ALL

SCOPE AND CONTENTS ▶

ADDITIONAL DESCRIPTION ▶

SUBJECTS ▶

COLLECTION ORGANIZATION

Papers of Julia Child, 1925-1993
- Series I. BIOGRAPHICAL, 1925-1993 …
- Series II. CORRESPONDENCE, 1925-…
- Series III. TEACHING, 1951-1993 (#5…
- Series IV. WRITINGS, 1952-1989 (#74…
- Series V. PUBLICITY, 1961-1993 (#96…
- Series VI. AUDIOVISUAL AND OVERSI…

https://hollisarchives.lib.harvard.edu/repositories/8/resources/5027

HOLLIS for Archival Discovery

BROWSE: REPOSITORIES | COLLECTIONS | DIGITAL MATERIALS | S

COLLECTION Identifier: MC 644; T-139; Vt-23; Phon 15

Papers of Julia Child, 1925-1993

https://hollisarchives.lib.harvard.edu/repositories/8/resources/5027

(Obligatory) Open Archival Information System (OAIS) Slide

Digital Object Model
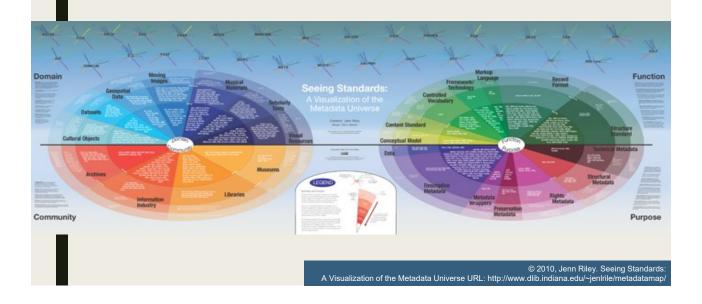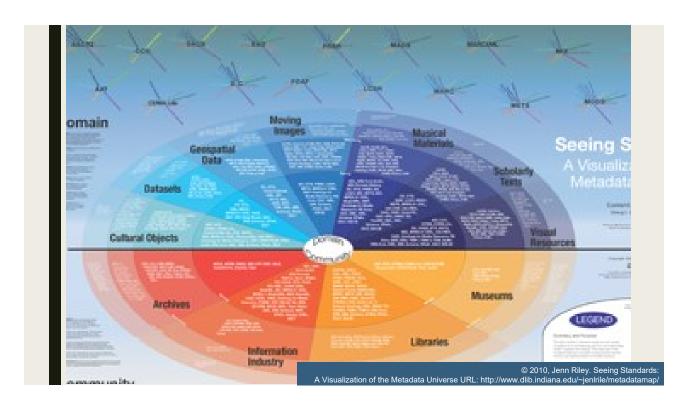
So, for YOUR metadata needs, you SHOULD use…

*Obligatory Metadata Schema and Vocabulary Slide

- ■ Dublin Core, unless you should use…
- ■ MODS, unless you should use…
- ■ MARC XML, unless you should use…
- ■ VRA, unless you should use…
- ■ CDWA Lite, unless you should use…
- ■ RDF, unless you should use…
- ■ EAD, unless you should use…
- ■ METS, unless you should use…
- ■ XACML, unless you should you…

- ■ With LSCH, AAT, LOD, DACS, or RDA or…

So, for your metadata, you SHOULD use…

*Obligatory Metadata Schema and Vocabulary Slide

- ■ …ss you should use…
- ■ MODS, unless …uld use…
- ■ MARC XML, unless … …uld use…
- ■ VRA, unless you shoul…
- ■ CDWA Lite, unless you s… use…
- ■ RDF, unless you should u…
- ■ …unless you should u…
- ■ ME… …ss you shoul…
- ■ XACML, … …u si… …you…

- ■ With … …D, DACS, or RDA or…

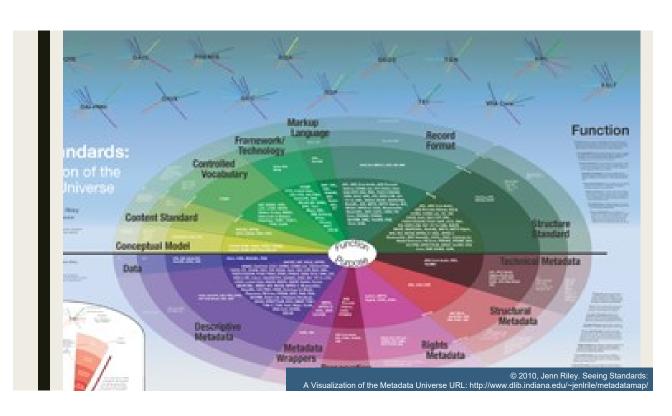## So, for YOUR metadata needs, you SHOULD use...

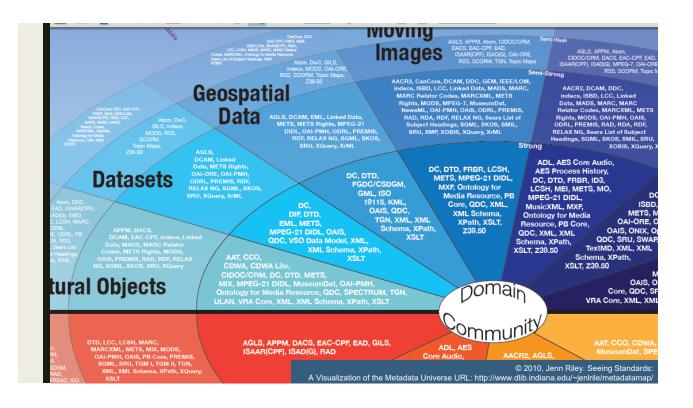*Obligatory Metadata Schema and Vocabulary Slide

- Dublin Core, unless you should use...
- MODS, unless you should use...
- MARC XML, unless you should use...
- VRA, unless you should use...
- CDWA Lite, unless you should use...
- RDF, unless you should use...
- EAD, unless you should use...
- METS, unless you should use...
- XACML, unless you should you...
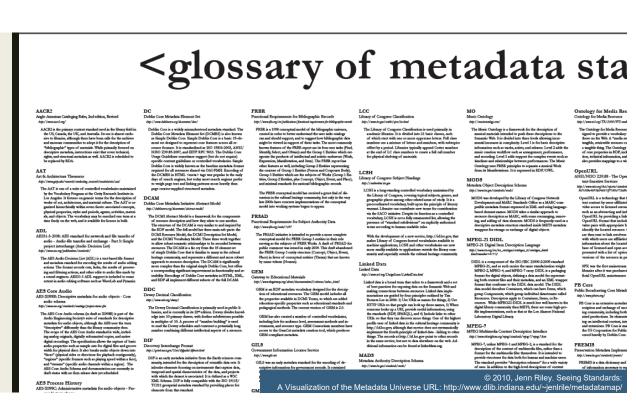
- With LSCH, AAT, LOD, DACS, or RDA or...

There are A LOT of metadata possibilities...

© 2010, Jenn Riley. Seeing Standards:
A Visualization of the Metadata Universe URL: http://www.dlib.indiana.edu/~jenlrile/metadatamap/

© 2010, Jenn Riley. Seeing Standards:
A Visualization of the Metadata Universe URL: http://www.dlib.indiana.edu/~jenlrile/metadatamap/

Seeing Standards: A Visualization of the Metadata Universe

Moving Images

Geospatial Data

Datasets

...tural Objects

Domain Community

Semi-Weak

Semi-Strong

Strong

Moving Images: AGLS, APPM, Atom, CIDOC/CRM, DACS, EAC-CPF, EAD, ISAAR(CPF), ISAD(G), OAI-ORE, RSS, SCORM, TGN, Topic Maps

AGLS, APPM, Atom, CIDOC/CRM, DACS, EAC-CPF, EAD, ISAAR(CPF), ISAD(G), MPEG-7, OAI-ORE, RSS, SCORM, Topic M...

AACR2, CanCore, DCAM, DDC, GEM, IEEE/LOM, indecs, ISBD, LCC, Linked Data, MADS, MARC, MARC Relator Codes, MARCXML, METS Rights, MODS, MPEG-7, MuseumDat, NewsML, OAI-PMH, OAIS, ODRL, PREMIS, RAD, RDA, RDF, RELAX NG, Sears List of Subject Headings, SGML, SKOS, SMIL, SRU, XMP, XOBIS, XQuery, XrML

AACR2, DCAM, DDC, indecs, ISBD, LCC, Linked Data, MADS, MARC, MARC Relator Codes, MARCXML, METS Rights, MODS, OAI-PMH, OAIS, ODRL, PREMIS, RAD, RDA, RDF, RELAX NG, Sears List of Subject Headings, SGML, SKOS, SMIL, SRU, XOBIS, XQuery, X...

Geospatial Data: AGLS, DCAM, EML, Linked Data, METS, METS Rights, MPEG-21 DIDL, OAI-PMH, OAIS, ODRL, PREMIS, RDF, RELAX NG, SGML, SKOS, SRU, XQuery, XrML

DC, DTD, FGDC/CSDGM, GML, ISO 19115, KML, OAIS, QDC, TGN, XML, XML Schema, XPath, XSLT

DC, DTD, FRBR, LCSH, METS, MPEG-21 DIDL, MXF, Ontology for Media Resource, PB Core, QDC, XML, XML Schema, XPath, XSLT, Z39.50

ADL, AES Core Audio, AES Process History, DC, DTD, FRBR, ID3, LCSH, MEI, METS, MO, MPEG-21 DIDL, MusicXML, MXF, Ontology for Media Resource, PB Core, QDC, XML, XML Schema, XPath, XSLT, Z39.50

Datasets: AGLS, DCAM, Linked Data, METS Rights, OAI-ORE, OAI-PMH, ODRL, PREMIS, RDF, RELAX NG, SGML, SKOS, SRU, XQuery, XrML

DC, DIF, DTD, EML, METS, MPEG-21 DIDL, OAIS, QDC, VSO Data Model, XML, XML Schema, XPath, XSLT

APPM, DACS, DCAM, EAC-CPF, indecs, Linked Data, MADS, MARC Relator Codes, METS Rights, MODS, OAIS, PREMIS, RAD, RDF, RELAX NG, SGML, SKOS, SRU, XQuery

AAT, CCO, CDWA, CDWA Lite, CIDOC/CRM, DC, DTD, METS, MIX, MPEG-21 DIDL, MuseumDat, OAI-PMH, Ontology for Media Resource, QDC, SPECTRUM, TGN, ULAN, VRA Core, XML, XML Schema, XPath, XSLT

DTD, LCC, LCSH, MARC, MARCXML, METS, MIX, MODS, OAI-PMH, OAIS, PB Core, PREMIS, SGML, SRU, TGM I, TGM II, TGN, XML, XML Schema, XPath, XQuery, XSLT

AGLS, APPM, DACS, EAC-CPF, EAD, GILS, ISAAR(CPF), ISAD(G), RAD

ADL, AES Core Audio,

AACR2, AGLS,

AAT, CCO, CDWA, MuseumDat, SPE...

<glossary of metadata sta...

AACR2
Anglo-American Cataloging Rules, 2nd edition, Revised
http://www.aacr2.org/

AAT
Art & Architecture Thesaurus
http://www.getty.edu/research/conducting_research/vocabularies/aat/

ADL
AES31-3-2008: AES standard for network and file transfer of audio – Audio-file transfer and exchange – Part 3: Simple project interchange (Audio Decision List)
http://www.aes.org/publications/standards/

AES Core Audio
AES-X098B: Descriptive metadata for audio objects - Core schema
http://www.aes.org/standards/meetings/project-status.cfm

AES Process History
AES-X098C: Administrative metadata for audio objects - Pro...

DC
Dublin Core Metadata Element Set
http://www.dublincore.org/documents/dces/

DCAM
Dublin Core Metadata Initiative Abstract Model
http://dublincore.org/documents/abstract-model/

DDC
Dewey Decimal Classification
http://www.oclc.org/dewey/

DIF
Discovery Interchange Format

FRBR
Functional Requirements for Bibliographic Records
http://www.ifla.org/en/publications/functional-requirements-for-bibliographic-records

FRSAD
Functional Requirements for Subject Authority Data
http://www.ifla.org/node/1297

GEM
Gateway to Educational Materials
http://www.thegateway.org/about/documentation2/chorus/index_html/

GILS
Government Information Locator Service
http://www.gils.net/

GM...

LCC
Library of Congress Classification
http://www.loc.gov/catdir/cpso/lcc.html

LCSH
Library of Congress Subject Headings
http://authorities.loc.gov

Linked Data
Linked Data
http://www.w3.org/DesignIssues/LinkedData.html

MADS
Metadata Authority Description Schema
http://www.loc.gov/standards/mads/

MO
Music Ontology
http://musicontology.com/

MODS
Metadata Object Description Schema
http://www.loc.gov/standards/mods/

MPEG-21 DIDL
MPEG-21 Digital Item Description Language
http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=41112

MPEG-7
MPEG Multimedia Content Description Interface
http://mpeg.chiariglione.org/mpeg/standards/mpeg-7/mpeg-7.htm

MPEG-2

Ontology for Media Res...
Ontology for Media Resource
http://www.w3.org/TR/2009/WD-medi...

OpenURL
ANSI/NISO Z39.88 - The Open text-Sensitive Services

PB Core
Public Broadcasting Core Metad...
http://www.pbcore.org/

PREMIS
Preservation Metadata Implement...
http://www.loc.gov/standards/premis/

A View of VRA Core

Corinthian Black-figure neck amphora

WORK

[id: w_00000014, refid: 18313, source: History of Art Visual Resources Collection, UCB]

agent = Walters Painter (Greek, act. c. 625-600 BCE)

date = c. 625-600 BCE

description = Two handled neck-amphora with five animal friezes plus neck decoration from Rhodes

location = London: British Museum (1914.10-30.1)

material = painted terracotta

measurements = 35 cm (H)

relation = Full view, side A [type: imagels, relids: i_00000016]

source = Amyx, Darrell A., Corinthian vase-painting of the Archaic period, Berkeley: UC Press, 1988

stylePeriod = Early Corinthian, Animal Style

subject = animals; birds; friezes (ornamental bands); zoophori

technique = painting

textref = Amyx CVP 144.2 (NC 770)

http://gort.ucsd.edu/escowles/vracore4/examples/

Syntax (XML)
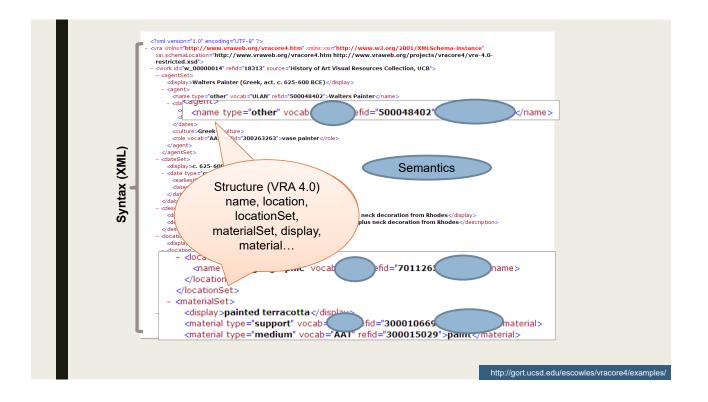
```xml
<?xml version="1.0" encoding="UTF-8" ?>
<vra xmlns="http://www.vraweb.org/vracore4.htm" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.vraweb.org/vracore4.htm http://www.vraweb.org/projects/vracore4/vra-4.0-
  restricted.xsd">
  <work id="w_00000014" refid="18313" source="History of Art Visual Resources Collection, UCB">
   <agentSet>
     <display>Walters Painter (Greek, act. c. 625-600 BCE)</display>
     <agent>
       <name type="other" vocab="ULAN" refid="500048402">Walters Painter</name>
       <dates type="activity">
         <earliestDate>-0625</earliestDate>
         <latestDate>-0600</latestDate>
       </dates>
       <culture>Greek</culture>
       <role vocab="AAT" refid="300263263">vase painter</role>
     </agent>
   </agentSet>
   <dateSet>
     <display>c. 625-600 BCE</display>
     <date type="creation">
       <earliestDate>-0625</earliestDate>
       <latestDate>-0600</latestDate>
     </date>
   </dateSet>
   <descriptionSet>
     <display>Two handled neck-amphora with five animal friezes plus neck decoration from Rhodes</display>
     <description>Two handled neck-amphora with five animal friezes plus neck decoration from Rhodes</description>
   </descriptionSet>
   <locationSet>
     <display>London: British Museum (1914.10-30.1)</display>
     <location type="repository">
       <name type="corporate">British Museum</name>
       <name type="geographic" vocab="TGN" refid="7011781">London</name>
       <refid type="accession">1914.10-30.1</refid>
     </location>
     <location type="discovery">
       <name type="geographic" vocab="TGN" refid="7011265">Rhodes</name>
     </location>
   </locationSet>
   <materialSet>
     <display>painted terracotta</display>
     <material type="support" vocab="AAT" refid="300010669">terracotta</material>
     <material type="medium" vocab="AAT" refid="300015029">paint</material>
```

http://gort.ucsd.edu/escowles/vracore4/examples/
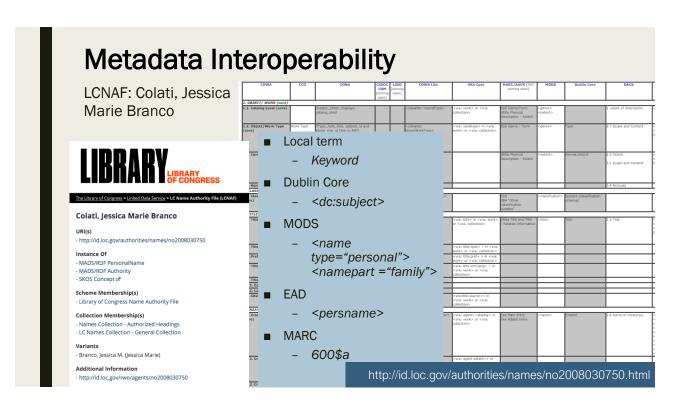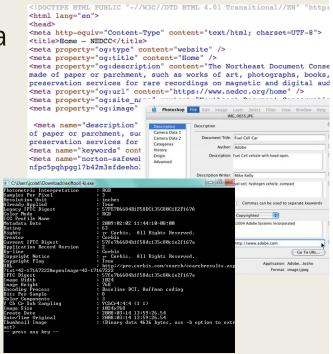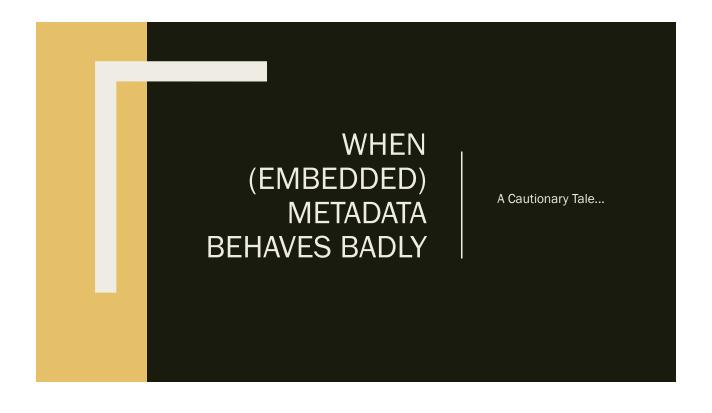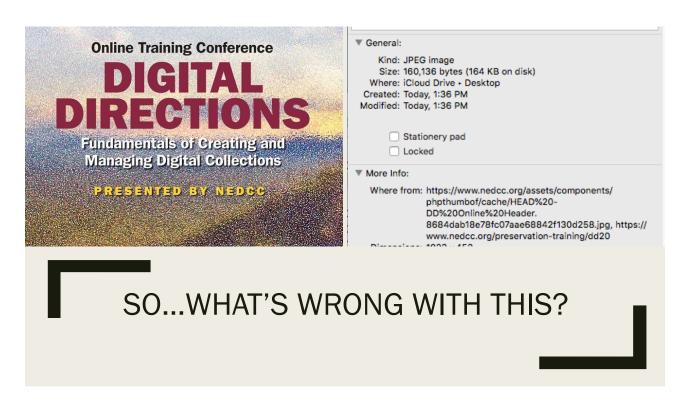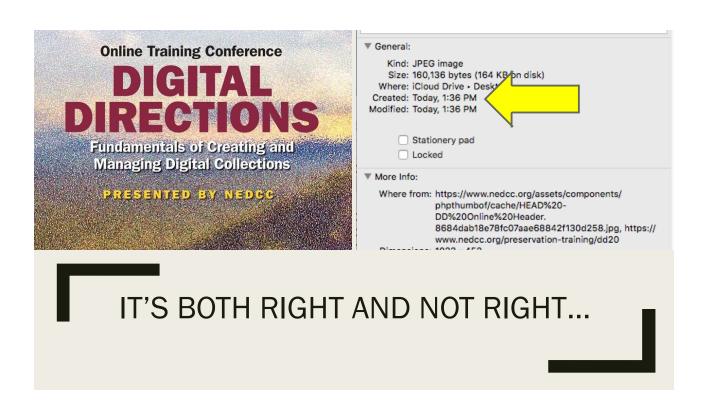
Metadata Interoperability

LCNAF: Colati, Jessica Marie Branco

LIBRARY LIBRARY OF CONGRESS

The Library of Congress > Linked Data Service > LC Name Authority File (LCNAF)

Colati, Jessica Marie Branco

URI(s)
- http://id.loc.gov/authorities/names/no2008030750

Instance Of
- MADS/RDF PersonalName
- MADS/RDF Authority
- SKOS Concept ↗

Scheme Membership(s)
- Library of Congress Name Authority File

Collection Membership(s)
- Names Collection - Authorized Headings
- LC Names Collection - General Collection

Variants
- Branco, Jessica M. (Jessica Marie)

Additional Information
- http://id.loc.gov/rwo/agents/no2008030750

- **Local term**
  - *Keyword*
- **Dublin Core**
  - *<dc:subject>*
- **MODS**
  - *<name type="personal"> <namepart ="family">*
- **EAD**
  - *<persname>*
- **MARC**
  - *600$a*

http://id.loc.gov/authorities/names/no2008030750.html
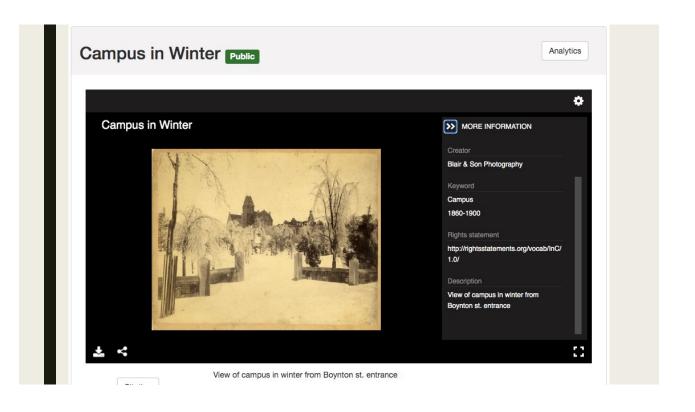

Embedded Metadata

- **Email Headers**
  - *Timestamps, audit trails, encoding information*

- **Website Headers**
  - *"Meta tags"*

- **XML Headers**
  - *TEI, EAD, MEI "bibliographic" information*

- **Image and Media files**
  - *Descriptive, technical, and structural information*

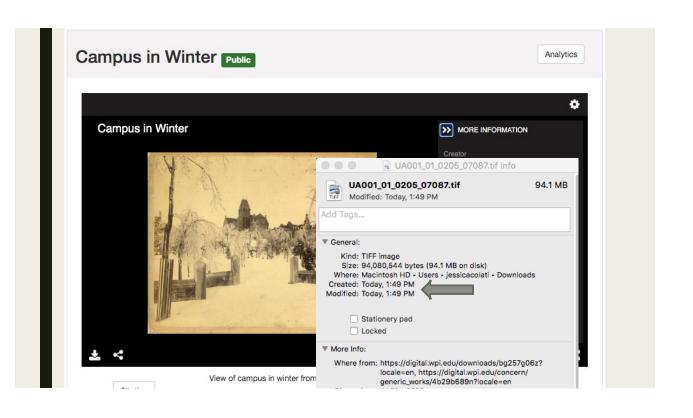- **Digital files**
  - *Rights, access, usage Information*

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http:
<html lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Home — NEDCC</title>
<meta property="og:type" content="website" />
<meta property="og:title" content="Home" />
<meta property="og:description" content="The Northeast Document Conse
made of paper or parchment, such as works of art, photographs, books,
preservation services for rare recordings on magnetic and digital aud
<meta property="og:url" content="https://www.nedcc.org/home" />
<meta property="og:site_na...
<meta property="og:image"
```

```
<meta name="description"
of paper or parchment, suc
preservation services for
<meta name="keywords" cont
<meta name="norton-safeweb
nfpc5pqhpgg17b42m3sfdeeho1
```

Photoshop File Edit Image Layer Select Filter View Window Help
IMG_0655.JPG

Description — Document Title: Fuel Cell Car — Author: Adobe — Description: Fuel Cell vehicle with hood open. — Description Writer: Mike Kelly

```
C:\Users\jcolati\Downloads\exiftool(-k).exe
Photometric Interpretation    : RGB
Samples Per Pixel             : 3
Resolution Unit               : inches
Already Applied               : True
Legacy IPTC Digest            : 57FE7B6604B1F58DC135C80C1E2F167A
Color Mode                    : RGB
ICC Profile Name
Metadata Date                 : 2009:02:02 11:44:10-08:00
Rating                        : 63
Rights                        : ⊤ Corbis.  All Rights Reserved.
Creator                       : Corbis
Current IPTC Digest           : 57fe7b6604b1f58dc135c80c1e2f167a
Application Record Version     : 2
By-line                       : Corbis
Copyright Notice              : ⊤ Corbis.  All Rights Reserved.
Copyright Flag                : True
URL                           : http://pro.corbis.com/search/searchresults.asp
?txt=42-17167222&openImage=42-17167222
IPTC Digest                   : 57fe7b6604b1f58dc135c80c1e2f167a
Image Width                   : 1024
Image Height                  : 768
Encoding Process              : Baseline DCT, Huffman coding
Bits Per Sample               : 8
Color Components              : 3
Y Cb Cr Sub Sampling          : YCbCr4:4:4 (1 1)
Image Size                    : 1024x768
Create Date                   : 2008:03:14 13:59:26.54
Date/Time Original            : 2008:03:14 13:59:26.54
Thumbnail Image               : (Binary data 4636 bytes, use -b option to extr
act)
-- press any key --
```

WHEN (EMBEDDED) METADATA BEHAVES BADLY

A Cautionary Tale...

Online Training Conference
DIGITAL DIRECTIONS
Fundamentals of Creating and Managing Digital Collections

PRESENTED BY NEDCC

▼ General:
    Kind: JPEG image
    Size: 160,136 bytes (164 KB on disk)
    Where: iCloud Drive ▸ Desktop
  Created: Today, 1:36 PM
  Modified: Today, 1:36 PM

        ☐ Stationery pad
        ☐ Locked

▼ More Info:

    Where from: https://www.nedcc.org/assets/components/
                phpthumbof/cache/HEAD%20-
                DD%20Online%20Header.
                8684dab18e78fc07aae68842f130d258.jpg, https://
                www.nedcc.org/preservation-training/dd20

SO...WHAT'S WRONG WITH THIS?

Online Training Conference

DIGITAL DIRECTIONS

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phpthumbof/cache/HEAD%20-
DD%20Online%20Header.
8684dab18e78fc07aae68842f130d258.jpg, https://
www.nedcc.org/preservation-training/dd20

IT'S BOTH RIGHT AND NOT RIGHT...

Campus in Winter Public

Analytics

Campus in Winter

⯈⯈ MORE INFORMATION

Creator
Blair & Son Photography

Keyword
Campus
1860-1900

Rights statement
http://rightsstatements.org/vocab/InC/
1.0/

Description
View of campus in winter from
Boynton st. entrance

View of campus in winter from Boynton st. entrance

Preservation Metadata

- PREMIS
  - *Core preservation metadata needed to support the long-term preservation of digital materials*
- Checksums
- mimeTypes
- Format registries
- Events and logs

A Closer Look at PREMIS

UNDERSTANDING PREMIS

Library of Congress Network Development and MARC Standards Office

Author: Priscilla Caplan

Revision: PREMIS Editorial Committee

https://www.loc.gov/standards/premis/understanding-premis-rev2017.pdf

Figure 1: PREMIS as a subset of all Preservation Metadata

```
<event>
    <eventIdentifier>
        <eventIdentifierType>DAITSS</eventIdentifierType>
        <eventIdentifierValue>10012</eventIdentifierValue>
    </eventIdentifier>
    <eventType>Format Validation</eventType>
    <eventDateTime>2008-05-06T10:40:22-04:00</eventDateTime>
    <eventOutcomeInformation>
        <eventOutcome>Invalid</eventOutcome>
        <eventOutcomeDetail>
            <eventOutcomeDetailNote>ill-formed DateTime value</eventOutcomeDetailNote>
        </eventOutcomeDetail>
    </eventOutcomeInformation>
</event>
```

Figure 4: A snippet of PREMIS in XML

[IT'S OK TO] BE META HUMAN

Two Truths of Metadata

Truth 1: Your metadata will very likely not be perfect. Therefore - and this is hard - try not to *need* to be perfect.

Truth 2: Plan for the *foreseeable future*. Therefore, don't aim for forever.

More Metadata Truths

Metadata...
- *is never "free"*
- *is not "one-size-fits all"*
- *relates to more than the description of an object*
- *can come from a variety of sources*
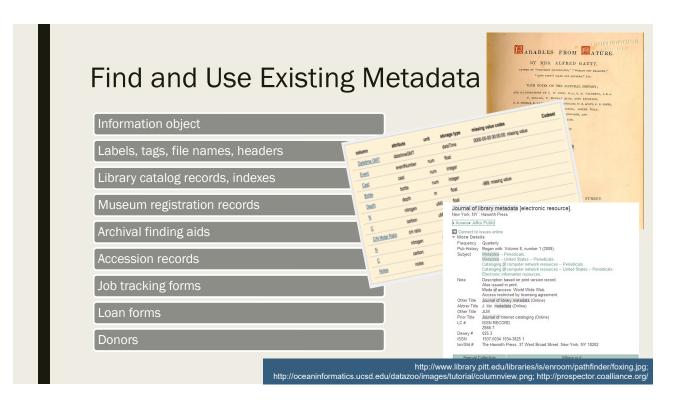- *continues to accrue and evolve over time*
- ***has its own metadata***

Setting the Stage. A. Gilliland. In Introduction to Metadata. ed.Murtha Baca
URL:http://www.getty.edu/research/publications/electronic_publications/intrometadata/setting.html

BE A META KISS-ER

Keep It as Super Simple as possible

Start by

- Examining your information object(s)

- Figuring out what information you need, want, and hope to capture

- Find out what information you already have

Find and Use Existing Metadata

- Information object
- Labels, tags, file names, headers
- Library catalog records, indexes
- Museum registration records
- Archival finding aids
- Accession records
- Job tracking forms
- Loan forms
- Donors

http://www.library.pitt.edu/libraries/is/enroom/pathfinder/foxing.jpg;
http://oceaninformatics.ucsd.edu/datazoo/images/tutorial/columnview.png; http://prospector.coalliance.org/

Functional Requirements of YOUR Metadata

What metadata standards, schema, content, data, etc., do you think will work best?

Consider needs of the creator*, manager*, and end-user*
- *Designated community**
- *Management strategies and systems*
- *Discovery experience*
- *Access and Presentation preferences*
- *Use/Reuse of object*

Seeing Standards: A Visualization of the Metadata Universe

http://metadata.emory.edu/
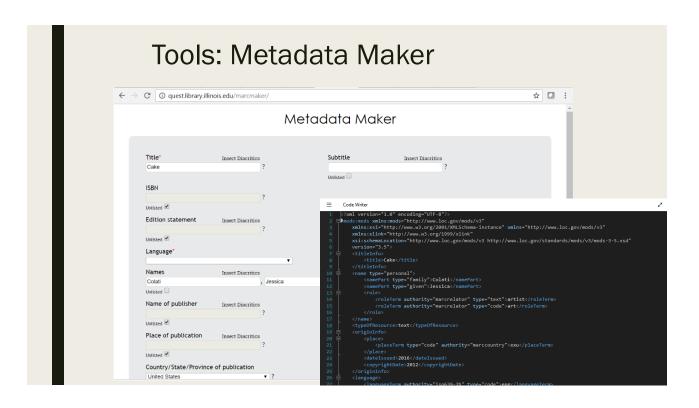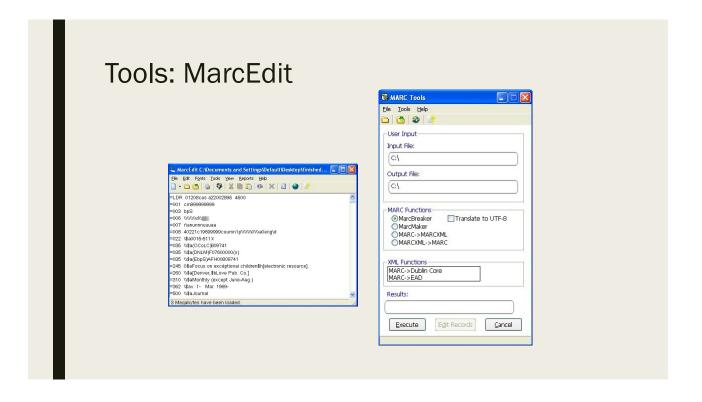
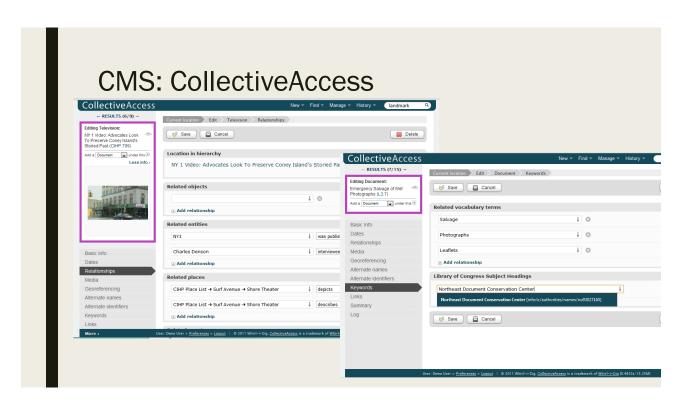# BE META ORGANIZED

Metadata Creation Tools

- Files
- Spreadsheets
- Databases
- Content Management Systems
- Digital Asset Managements Systems
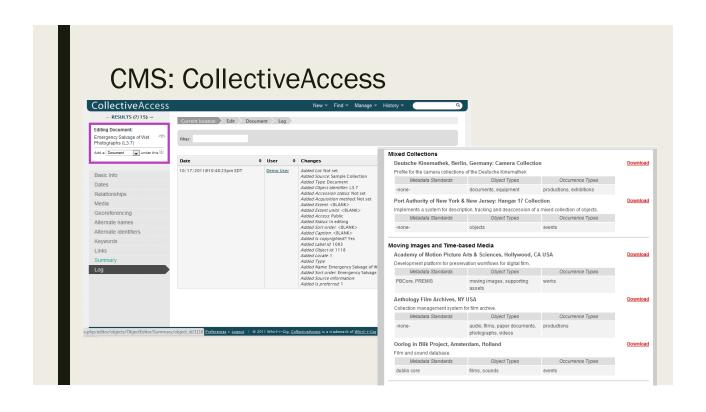- Collection Managements Systems
- Vendor Services

Tools: Metadata Maker

Tools: MarcEdit

Management Strategies

- Files
- Spreadsheets
- Databases
- Content Management Systems
- Digital Asset Managements Systems
- Collection Managements Systems
- Vendor Systems

CMS: CollectiveAccess

CMS: CollectiveAccess

BE META CONSISTENT

Have a Metadata Focus

- Purpose and Value

- Original vs. Representation vs. Surrogate

- Work/Object vs. Container/Carrier

- Document-like vs. Non-Document-like

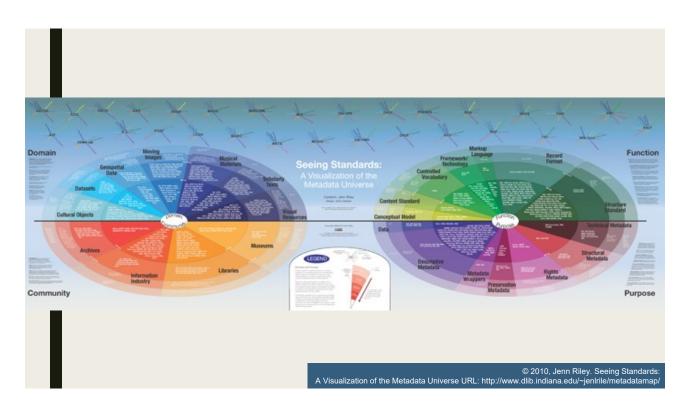- Collection-level vs. Item-level

- "Of"-ness vs. "About"-ness

Quality Indicators
(a.k.a."Chowdah Expectations")

Metadata Quality Considerations

- *Completeness*
- *Correctness*
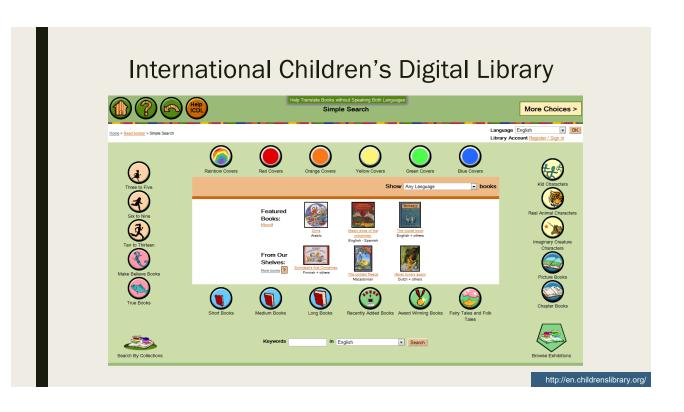- *Consistency*

BE META "SELFISH"

Good Metadata…

"is appropriate to the **materials** in the collection,

users of the collection,

and **current** and **potential future uses** of the collection"

07/07/2012

International Children's Digital Library

International Children's Digital Library

International Children's Digital Library

Metadata specification

I. **Language**
   A. **Metadata Language** *(Requ*
      List the English name of
      out this form. This is the
      translation is required be
      language you are using so
      necessary.
   B. **Book Language(s)**
      Enter the language(s) in
      book is written in two or
      language first, followed b
      book only has a few word
      language, do not list the l
      include a reader note.

II. **Title Information**
   A. **Display Title** *(Required)*
      Enter the book's title exa
      The default for the source
      the book. If the title is no
      the other source. If the bo
      languages are shown in th
      in all languages with an =
      you translate a title, if par
      transliterated because it i
      part can be translated, pu
      1. For the title, informa
         the following sources
         a. Title Page
         b. Cover
         c. Spine
         d. Other Source in t

III. **Creator(s)**
Enter the creators' names in the order in which they are listed
on the title page in the book. If the creator is not a person, but
rather an organization or s
organization in the First El
creators as are credited wit
person associated with the
illustrator, translator, etc.)
Name, Other Version (if av

   A. **Role(s)** *(Required)*
      Please select from our l
      author, illustrator, edit
      roles a creator perform
      information, write [non
   B. **Display Name** *(Required*
      Please list the creators'
      the book. List any degr
      end of the name like Jc
      or titles to the sorted n
      information, write [nor
   C. **Sorted Name** *(Required*
      1. **First Element** *(Requ*
         (Or primary part of
         name, or surname
         is a organization pl
         [none] with bracke
         not add degrees or
         is no creator inforn
         this field.
      2. **Second Element** *(R*
         (Given name, or fir
         add degrees or title
         no creator informa
         this field.

   B. **Subunits of Book** *(Optional)*
      Enter subunits of the content of the book such as short
      story titles, chapters, poems, etc. from the the table of
      contents or subunit heading. Please list no more than
      units. The subunits will give readers
      understanding of what is inside you
      categorize it better. Please put each
      line.
      ▪ Example
         • Book: *Mother Goose*
         • Subunits:
            1. Humpty Dumpty
            2. Ring O' Roses

   C. **Reader Notes** *(Optional)*
      Reader notes should provide additio
      might be of interest but are not four
      Please keep a child audience in min
      ▪ Example
         • The letters I and J were often
           when this book was written sc
           the letter I.

   D. **Subjects and Keywords** *(Recommen*
      We ask contributors for their own k
      can gain more information from the
      think the book is about and expand
      needed. However, we will use their
      from the abstract to fit their informa
      subject thesaurus.
      1. Focus on what categories would
         educator find a book easily.

Definitions of ICDL Genres:

1. **Action Adventure**
   Action adventure book
   stories) contain fast mo
   confronting and, ultim
   challenge. Action adve
   like the outdoors, spor

2. **Classics**
   Classics books have sto
   continue to be recomm
   classics like *Charlotte's*

3. **Concept Books**
   These books aim to tea
   readers such as numbe
   with moral lessons mo
   folk tales.

4. **Folk and Fairy Tales**
   Folk tales usually come
   (handed down by word
   subunit of folk tales an
   beings with magical po
   lesson and generally er
   evil.

5. **Funny / Humorous**
   These stories are often

BIBLIOGRAPHIC CONVENTIONS

ICDL uses bibliographic standards
commonly used by librarians from around
the world.

▪ **Dublin Core**
   Our specifications for this form are based
   on the Qualified Dublin Core. ICDL chose
   the Dublin Core system to collect
   metadata information on books because
   of its international background, its ability
   to be understood by non-specialists, and
   the possibilities to extend its basic
   "elements" to meet our specific needs.
   Learn general information about Dublin
   Core at the **Dublin Core Web site**
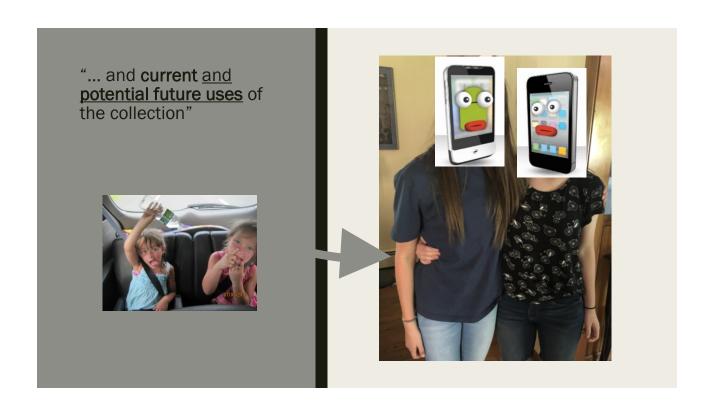   and/or explanation of the basic elements
   in many languages at **Dublin Core**
   Translations. For those familiar with
   Dublin Core, you will notice we have
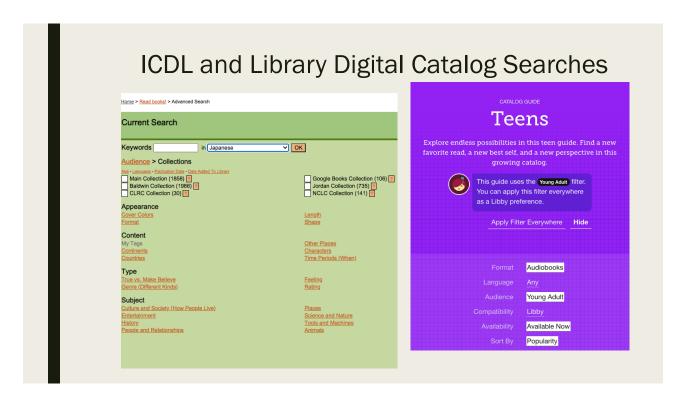   moved many elements of the Dublin Core
   around.

▪ **General International Standard**
   Bibliog

http://en.childrenslibrary.org/

"... and **current** and
potential future uses of
the collection"

"... and **current** and **potential future uses** of the collection"

ICDL and Library Digital Catalog Searches

Home > Read books! > Advanced Search

Current Search

Keywords [   ] in [Japanese ▾] [OK]

Audience > Collections
Age - Language - Publication Date - Date Added To Library
☐ Main Collection (1858) [?]   ☐ Google Books Collection (106) [?]
☐ Baldwin Collection (1986) [?]   ☐ Jordan Collection (735) [?]
☐ CLRC Collection (30) [?]   ☐ NCLC Collection (141) [?]

Appearance
Cover Colors   Length
Format   Shape

Content
My Tags   Other Places
Continents   Characters
Countries   Time Periods (When)

Type
True vs. Make Believe   Feeling
Genre (Different Kinds)   Rating

Subject
Culture and Society (How People Live) Places
Entertainment   Science and Nature
History   Tools and Machines
People and Relationships   Animals

CATALOG GUIDE
Teens

Explore endless possibilities in this teen guide. Find a new favorite read, a new best self, and a new perspective in this growing catalog.

This guide uses the **Young Adult** filter. You can apply this filter everywhere as a Libby preference.

Apply Filter Everywhere   **Hide**

Format	Audiobooks
Language	Any
Audience	Young Adult
Compatibility	Libby
Availability	Available Now
Sort By	Popularity

BE A PART OF THE META COMMUNITY
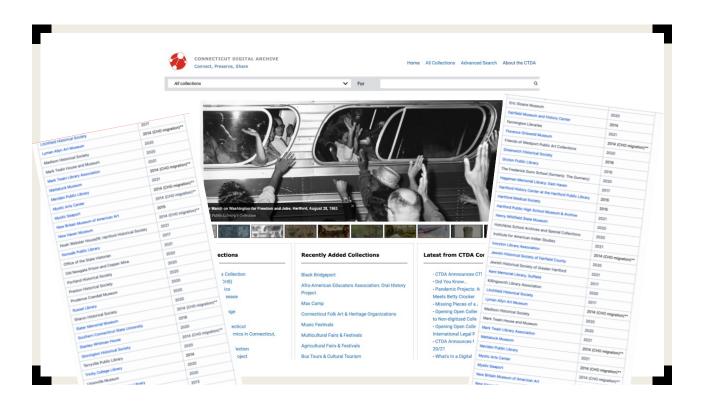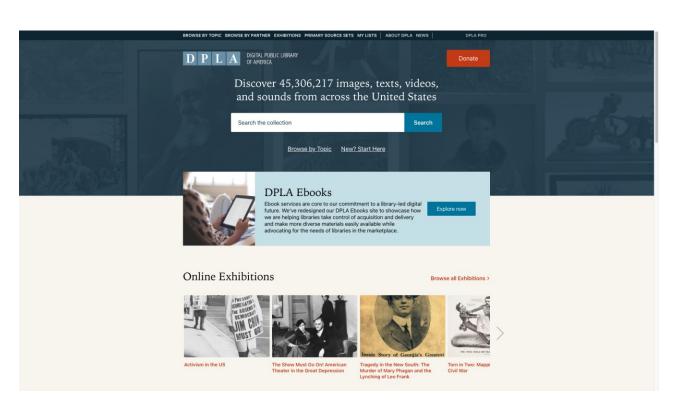
NO GOOD METADATA IS AN ISLAND...

Figure 1. DPLA MAP v5 Class Diagram

BE META GENEROUS

Global
Descriptive, Use

Community
Descriptive, Preservation, Use, Technical

Local
Administrative, Descriptive, Preservation, Use, Technical
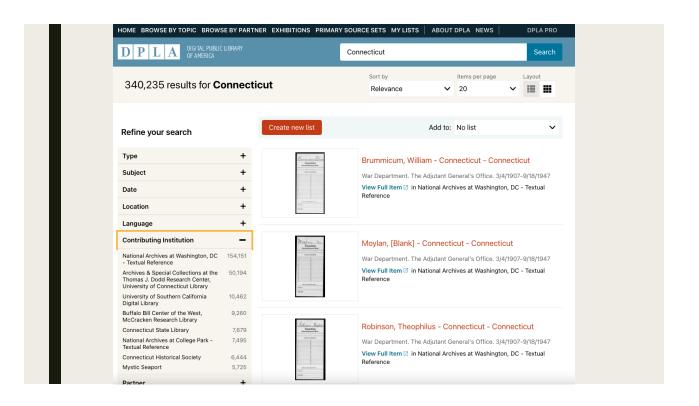
How Much Do You Share?

"At its most basic level shareable metadata should be human understandable." [Shreeves]

Machine "process-able"

Useful AND usable

Interoperable AND reusable

Support search interoperability

METS

- Metadata Encoding Transmission Schema
- Structures and Packages
- Encapsulates Metadata and Files

METS Metadata Encoding

Home

The METS schema is a standard for encoding descriptive, a
objects within a digital library, expressed using the XML sch
Consortium. The standard is maintained by the METS Board
and MARC Standards Office of the Library of Congress, and
Federation.

TECHNICAL DOCUMENTATION
- **METS Schema & Documentation**
- **METS External Schemas**
- **METS Example Documents**
- **METS Profiles**
- **METS Implementation Registry**

COMMUNITY AND ADDITIONAL RESOURCES
- **METS Presentations**
- **METS Suggested Reading List**
- **METS Tools & METS Compatible Software**
- **METS Events**

Latest METS Editoria
available from the 201
-- See Minutes

New METS Schema R
has a new revision to t
number to 1.11
-- See Announcement

New Monograph MET
Bibliographical Heritag
creation of a METS ser
objects that are archiv
Library Heritage Biblig

New Digital Object a
Library of the Czech Re
monographs, used for
documents (these are
Long Term Preservatio
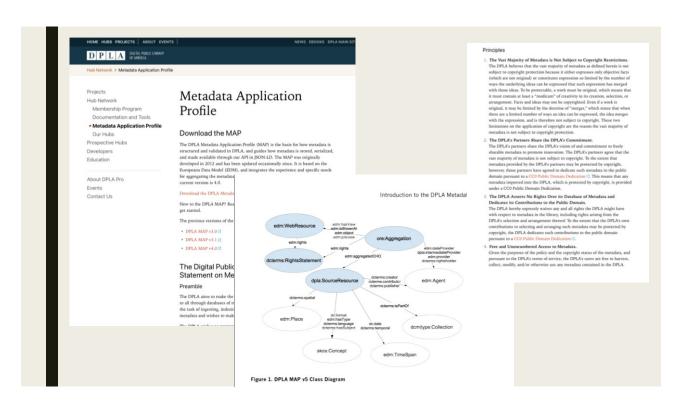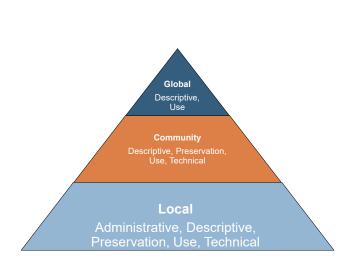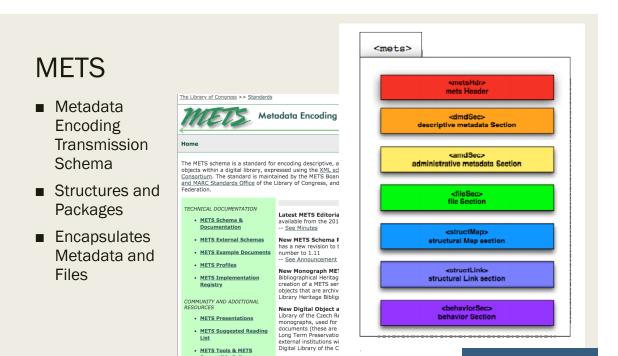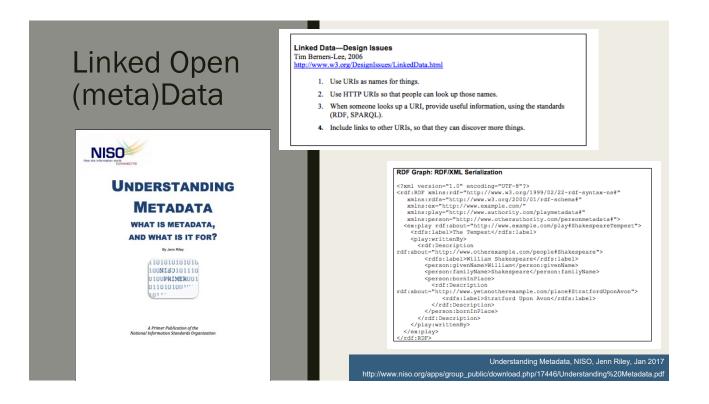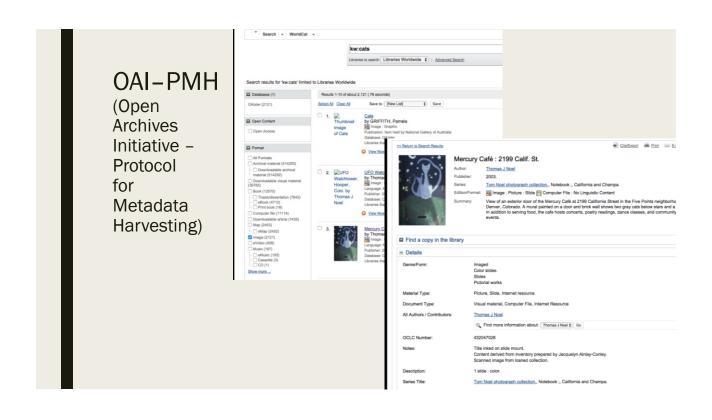external institutions wi
Digital Library of the C

New Version of Rosetta METS Profile: Ex Libris has registered a
version of their Rosetta METS Profile. This version supersedes the
previous version. This profile describes a Rosetta Intellectual Entity

`<mets>`

- **metsHdr** — mets Header
- **dmdSec** — descriptive metadata Section
- **amdSec** — administrative metadata Section
- **fileSec** — file Section
- **structMap** — structural Map section
- **structLink** — structural Link section
- **behaviorSec** — behavior Section

https://www.loc.gov/standards/mets/

Linked Open (meta)Data

UNDERSTANDING METADATA

NISO

WHAT IS METADATA, AND WHAT IS IT FOR?

By Jenn Riley

A Primer Publication of the
National Information Standards Organization

Linked Data—Design Issues
Tim Berners-Lee, 2006
http://www.w3.org/DesignIssues/LinkedData.html

1. Use URIs as names for things.
2. Use HTTP URIs so that people can look up those names.
3. When someone looks up a URI, provide useful information, using the standards (RDF, SPARQL).
4. Include links to other URIs, so that they can discover more things.

RDF Graph: RDF/XML Serialization

```xml
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
    xmlns:ex="http://www.example.com/"
    xmlns:play="http://www.authority.com/playmetadata#"
    xmlns:person="http://www.otherauthority.com/personmetadata#">
  <ex:play rdf:about="http://www.example.com/play#ShakespeareTempest">
    <rdfs:label>The Tempest</rdfs:label>
    <play:writtenBy>
      <rdf:Description
rdf:about="http://www.otherexample.com/people#Shakespeare">
        <rdfs:label>William Shakespeare</rdfs:label>
        <person:givenName>William</person:givenName>
        <person:familyName>Shakespeare</person:familyName>
        <person:bornInPlace>
          <rdf:Description
rdf:about="http://www.yetanotherexample.com/place#StratfordUponAvon">
            <rdfs:label>Stratford Upon Avon</rdfs:label>
          </rdf:Description>
        </person:bornInPlace>
      </rdf:Description>
    </play:writtenBy>
  </ex:play>
</rdf:RDF>
```

Understanding Metadata, NISO, Jenn Riley, Jan 2017
http://www.niso.org/apps/group_public/download.php/17446/Understanding%20Metadata.pdf

OAI–PMH
(Open Archives Initiative – Protocol for Metadata Harvesting)

METADATA GROOVIN'

OAI HARVESTING HIP-HOP

Be on the Right(s) Side of Access and Use

Determine your rights and levels of risk tolerance and communicate them

...and please listen to the Greg Crams working in this space!

BE META-FRIENDLY

Zooniverse Projects

https://www.zooniverse.org/

Citizen Archivist: Outside the Box Missions

https://www.archives.gov/citizen-archivist/missions/

Can they get any more meta?!?

...the metadata really IS eternal!*

Even after the [fill in the blank] fades away...

<TITLE>THANK YOU!</TITLE>
<SUBJECT>QUESTIONS?</SUBJECT>

Online Training Conference

DIGITAL DIRECTIONS

Fundamentals of Creating and Managing Digital Collections

PRESENTED BY NEDCC

Thank you!

Please complete the online evaluation form.

A link was sent to your email address.

You can edit your responses until you click submit.