* and other essential elements

METADATA*
FOR DIGITAL PROJECTS:
THINKING ABOUT THE NUTS & BOLTS

Workshop presented by Murtha Baca, PhD

University of San Diego Digital Initiatives Symposium, April 2019

Agenda

1:00	**Introduction and goals for the workshop. Participants introduce themselves and briefly explain why they are taking this workshop.**
1:15	Instructor's presentation (with class discussion and questions): overview of metadata formats; "Deep Web" versus "Visible Web;" controlled vocabularies, "project-specific vocabularies," social tagging; issues of access and metadata sharing; steps for developing a metadata strategy; entity-relationship diagrams and "storyboards."
2:30	Break
2:45	Participants work on storyboards for their specific projects, possibly including a simple conceptual model, data model, or entity-relationship model. Metadata format(s) and sources of terminology to be used should be identified.
3:15	Participants volunteer to present the digital projects that they are planning or are already in the process of implementing, highlighting some of the main elements outlined in the instructor's presentation.
3:45	Lessons learned; biggest challenges identified; final thoughts and questions.
4:00	Workshop concludes.

“Making a Website” ≠ Doing a Digital Project

Images and other digital assets without accompanying metadata are mostly useless, and generally “unfindable,” unsharable, and not re-usable.

Some digital projects in which I have participated

- Getty vocabularies: http://www.getty.edu/research/tools/vocabularies/ (+ Vocab LOD project)
- "Digital Mellini"—the Getty Research Institute's first digital critical facsimile publication (with metadata record in the GRI's OPAC, WorldCat, etc.): http://www.getty.edu/research/mellini/
- Getty Research Portal: http://portal.getty.edu/

The Role of Language

Weeping Woman

Crying Woman

Femme qui pleure

La larmoyante

La Mujer que llora

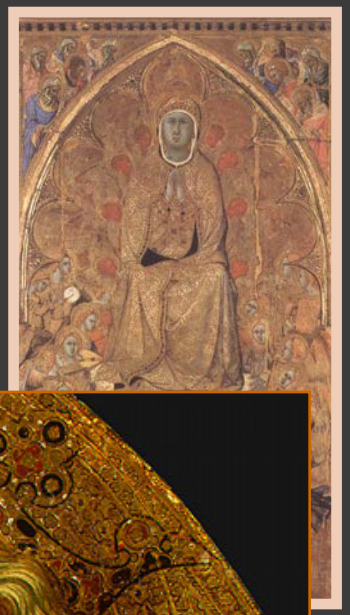
La Mujer llorando

Donna che piange

Donna piangente

Controlled vocabularies reflect the critical & linguistic history of an person, object, concept, etc., and provide important <u>additional access points</u>

Bulgarini, Bartolomeo
Bartolomeo Bolgarini
Bartolomeo Bolghini
Bartolomeo Bulgarini
Bartolommeo Bulgarini da Siena
Maestro d'Ovile
Master of the Ovile Madonna
Ovile Master
Lorenzetti, Ugolino
Ugolino Lorenzetti



names from Getty Union List of Artist Names (ULAN)

Example from Getty Research Institute
Cultural Objects Name Authority
(CONA)

Αγία Σοφία

Ayasofya

Church of the Holy Wisdom

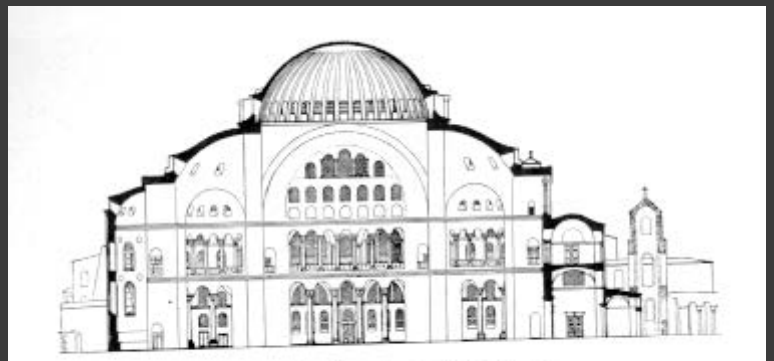
Hagia Sophia

Haghia Sophia

Saint Sophia

Sancta Sophia

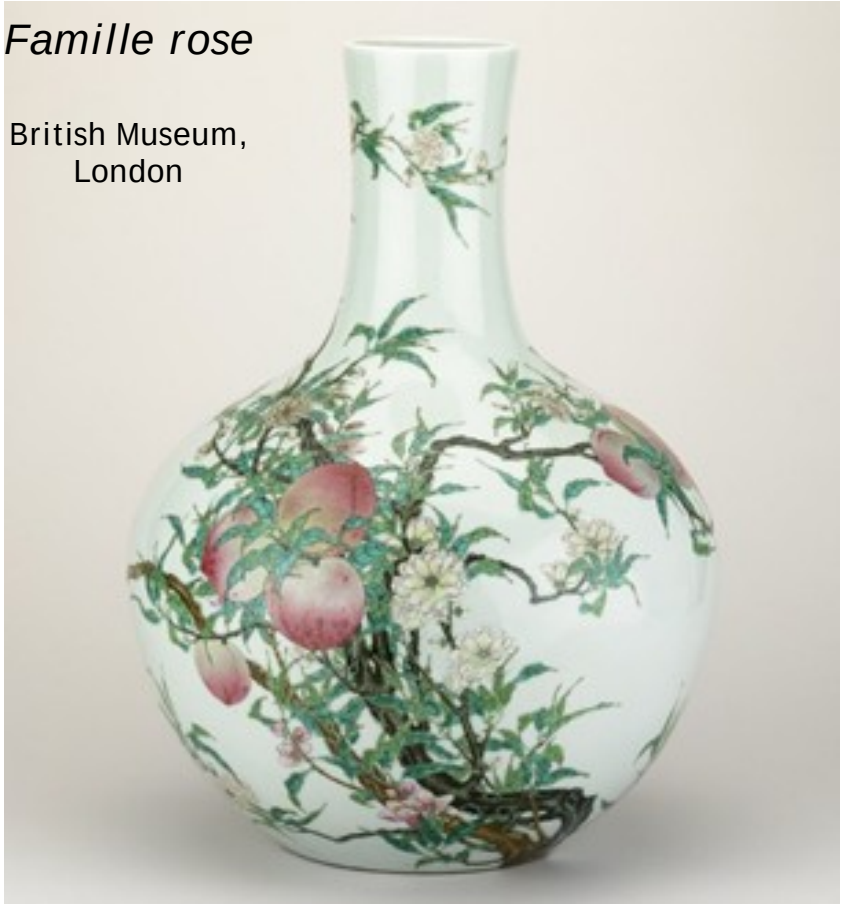
St. Sophia



66 Sancta Sophia, Istanbul. Section after A. M. Schneider

Linguistic and cultural “imperialism” can create barriers to access

Ch‘ien-lung Reign ,
Ch’ing dynasty (1644-1911)
清 乾隆 粉彩蟠桃天球瓶



Ch’ien-lung Reign, Ch’ing dynasty (1644-1911)

Using terminology to reach broader audiences: this is where "local" "collection-specific" or "resource-specific" controlled vocabularies, which can include non-expert and even "wrong" terms (as in "folksonomies") can help.

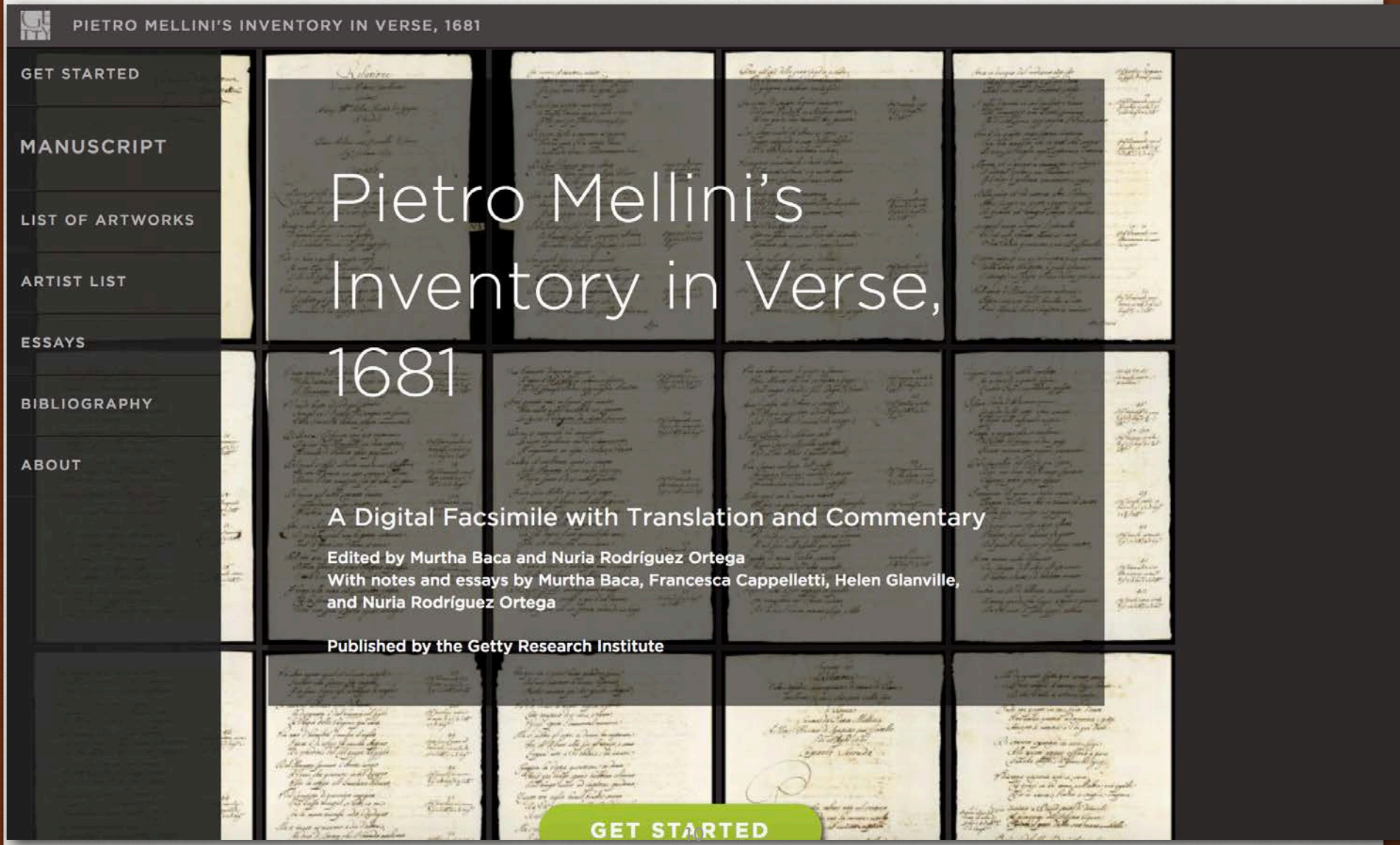
cabinet?

chest?

desk?

cartonnier?

"*Digital Mellini*":
The Getty Research Institute's First "Born-digital" Scholarly Publication



GETTY RESEARCH LIBRARY MARC RECORD FOR DIGITAL PUBLICATION

Pietro Mellini's inventory in verse, 1681 : a digital facsimile with translation and commentary / edited by Murtha Baca and Nuria Rodríguez Ortega ; with notes and essays by Murtha Baca, Francesca Cappelletti, Helen Glanville, and Nuria Rodríguez Ortega.
Mellini, Pietro, approximately 1651-1694, author.
Los Angeles : Getty Research Institute, 2015.

● Online access available

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Actions

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Title: Pietro Mellini's inventory in verse, 1681 : a digital facsimile with translation and commentary / edited by Murtha Baca and Nuria Rodríguez Ortega ; with notes and essays by Murtha Baca, Francesca Cappelletti, Helen Glanville, and Nuria Rodríguez Ortega.

Author/Creator: Mellini, Pietro, approximately 1651-1694, author.

Creation Date: 2015

Publisher Info.: Los Angeles : Getty Research Institute, 2015.

Biographical/Historical Note: Pietro Mellini (approximately 1651-1694) was the younger brother of Cardinal Savo Mellini (1644-1701), to whom the poem is addressed. Sons of Mario Mellini III, the brothers were the last scions of a prominent Roman family.

Summary: This handwritten inventory of paintings in the Casa Mellini, Rome, was written by Pietro Mellini in February 1681 to his brother, Cardinal Savo Mellini, nuncio in Spain, and composed in the form of a poem in terza rima. Ninety-five paintings are listed, with measurements. Artists mentioned include Caravaggio, Raphael, and Bronzino.

Language: English
Italian

Language Note: English and Italian.

Issued in Other Form: Facsimile of (item): Mellini, Pietro, approximately 1651-1694. Relatione di molte pitture eccellenti scritta a mons. ill:mo Millini nuntio di Spagna a Madrid. 1681

Notes: Includes bibliographical references.
Genres and Artists in the Mellini Collection / Francesca Cappelletti -- The Mellini Collection in the Context of Seventeenth-Century Baroque Rome / Francesca Cappelletti -- Who Were Pietro and Savo Mellini? / Nuria Rodríguez Ortega -- What Do We Know about the Fame of the Mellini Family's Art Collection at the Time of Pietro and Savo? / Nuria Rodríguez Ortega -- Where Was the Mellini Family's Art Collection Housed? / Nuria Rodríguez Ortega -- The Manuscript, and the Poem / Murtha Baca -- Provenance of the Mellini Manuscript / Nuria Rodríguez Ortega -- Comparison between the 1680 and 1681 Mellini Inventories / Nuria Rodríguez Ortega -- What Is an Inventory? / Francesca Cappelletti -- "Ut Pictura Poesis:" Ekphrasis in the Seventeenth Century / Nuria Rodríguez Ortega -- Art versus Nature / Helen Glanville.

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Pietro Mellini's inventory in verse, 1681 : a digital facsimile with translation and commentary

Author: Pietro Mellini; Murtha Baca; Nuria Rodríguez Ortega; Getty Research Institute,

Publisher: Los Angeles : Getty Research Institute, 2015.

Edition/Format: eBook : Document : English

Summary: This handwritten inventory of paintings in the Casa Mellini, Rome, was written by Pietro Mellini in February 1681 to his brother, Cardinal Savo Mellini, nuncio in Spain, and composed in the form of a poem in terza rima. Ninety-five paintings are listed, with measurements. Artists mentioned include Caravaggio, Raphael, and Bronzino.

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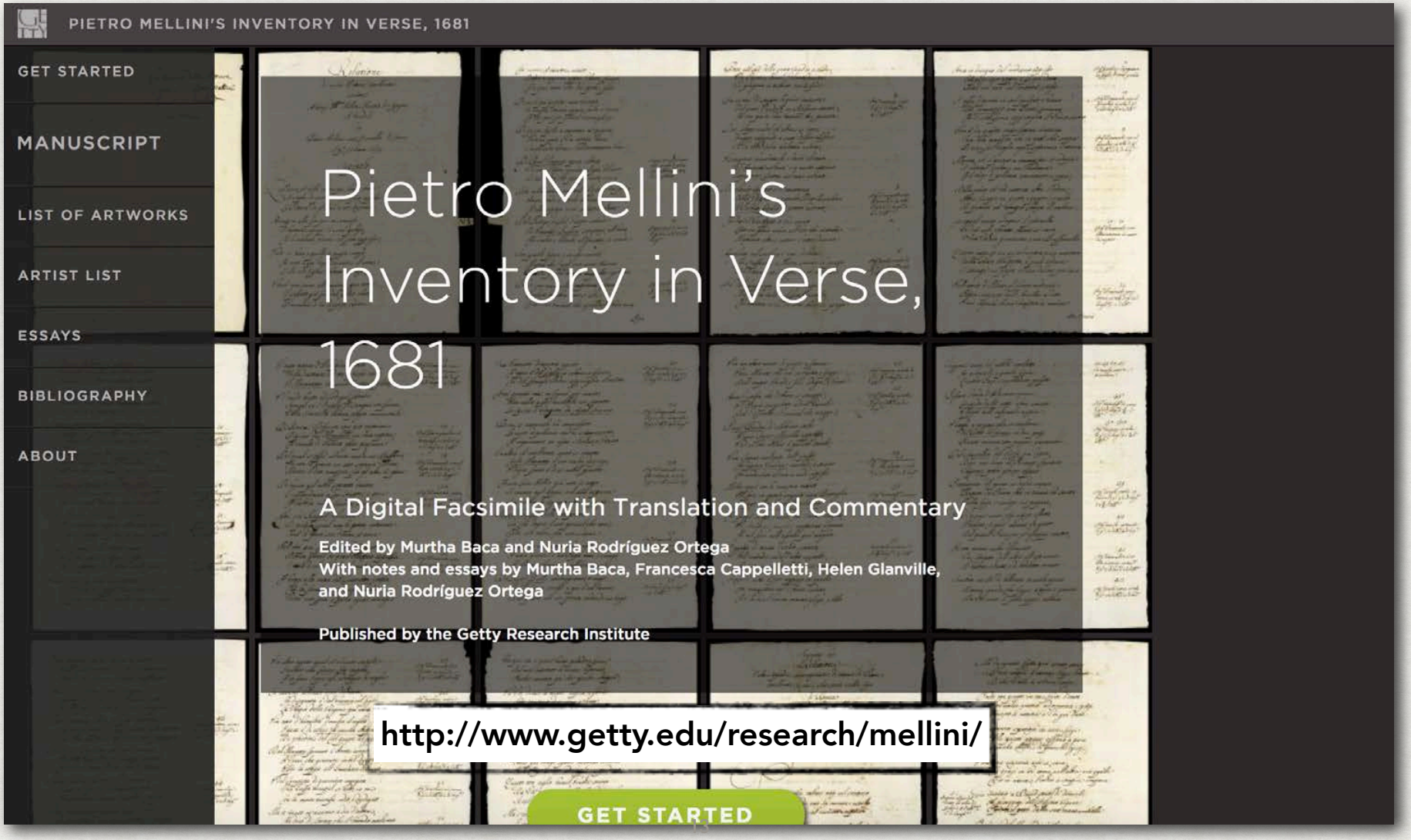

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ArtDiscovery
GROUP CATALOGUE

MELLINI INVENTORY

Libraries to search Art Libraries (all) | Advanced Search

Search results for 'MELLINI INVENTORY' limited to Art Libraries (all)

Databases (3)

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Kubikat (0)
SCIPIO (0)

Format

All Formats (10)
Article (8)
Archival material (1)
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Author
Pietro Mellini (2)
Burlot Delphine (1)
Congia Pierpaolo (1)
Fernandez Santos ... (1)
Jorge Fernández-... (1)
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Year
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2015 (4)
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1681 (1)
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Language: English
Publisher: Los Angeles : Getty Research Institute, 2015.
Database: WorldCat.org
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2. Relatione di molte pitture eccellenti scritta a mons. ill:mo Millini nuntio di Spagna a Madrid.
by Pietro Mellini; Savo Mellini; Thomas Phillipps, Sir
Archival material
Language: Italian
Publisher: 1681.
Database: WorldCat.org
Libraries that own this item: Art Libraries (all)
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3. The inventory of Pietro Mellini's collection at the palazzo del Rosario in 1680.
by Jorge Fernández-Santos Ortiz-Iribas
Article
Language: English
Publication: Burlington magazine / ed. Benedict Nicolson. 150.2008, 1265, 512-520
Publisher: 2008.
Database: WorldCat.org
Libraries that own this item: Art Libraries (all)

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ARCHIVEGRID

Relatione di molte pitture eccellenti scritta a mons. ill: Spagna a Madrid

Mellini, Pietro, approximately 1651-1694

Getty Research Institute

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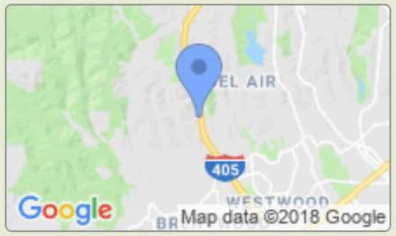

Details

1 item (12 unnumbered leaves).

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Pietro Mellini (approximately 1651-1694) was the younger brother of Cardinal Savo Mellini (1644-1701), to whom the poem is addressed. Sons of Mario Mellini III, the brothers were the last scions of a prominent Roman family.

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www.getty.edu/research/mellini/
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Getty Research Institute Releases The Unprecedented Digital ...
news.getty.edu/digital-mellini.htm
Apr 16, 2015 - The GRI's first born-digital publication, Pietro **Mellini's** Inventory in Verse, ... Pietro **Mellini's** Inventory in Verse, 1681, edited by Murtha **Baca** and ...

New Digital Publication Reveals the Workings of Art History | The Getty ...
blogs.getty.edu/iris/new-digital-publication-reveals-the-workings-of-art-history/
Apr 16, 2015 - The **Mellini** manuscript is a quirky one. As **Baca** notes in her essay "The Manuscript, and

The publication also has an ISBN number, like all of the Getty's print publications.

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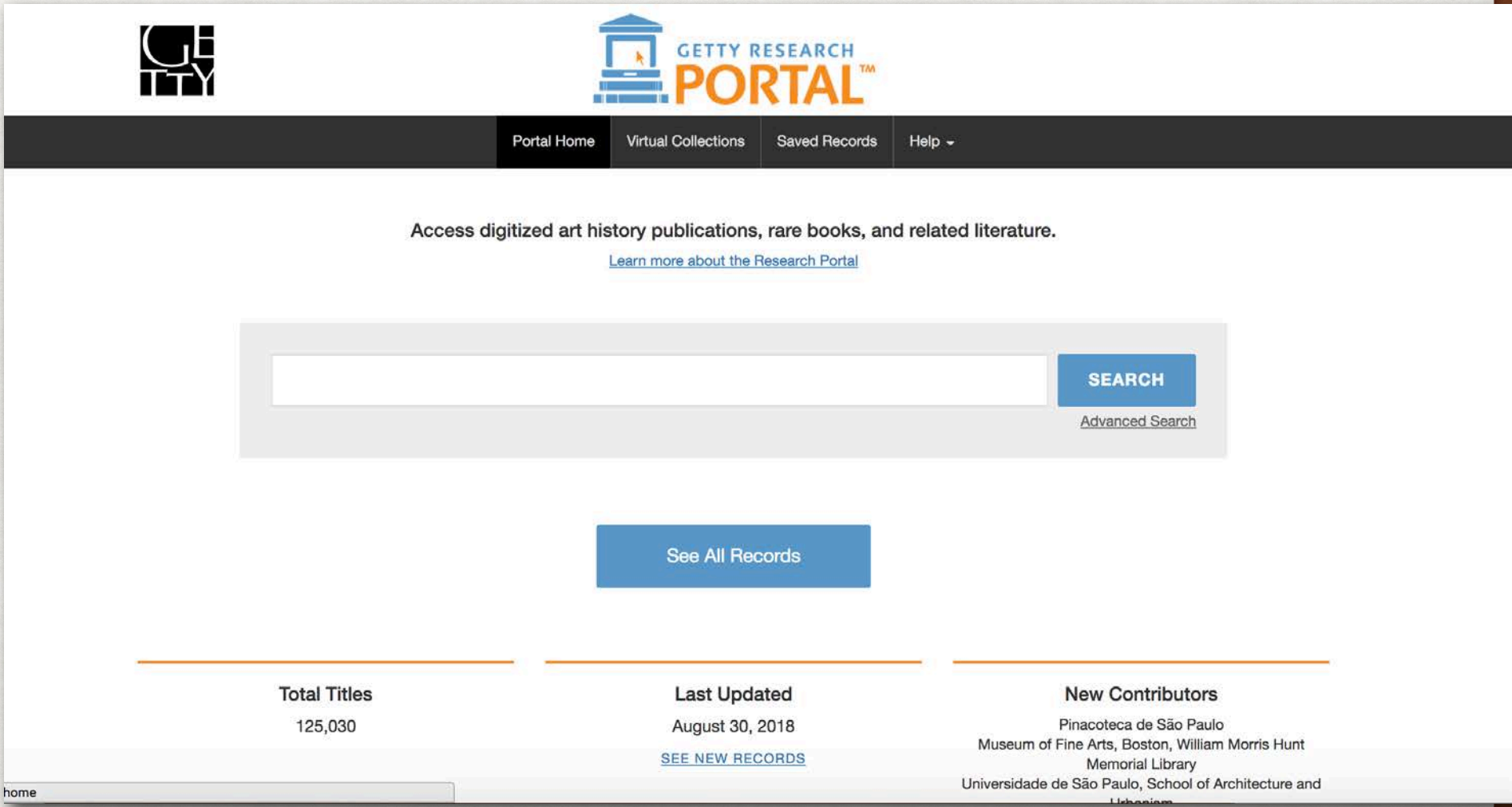

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Subject
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Creator: Cortés, Hernán, 1485-1547.
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Creator: Cortés, Hernán, 1485-1547.

Date: Anno Dnĩ. M.D.XXIIII KL. Martii [March 1, 1524]

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Creator	Cortés, Hernán, 1485-1547.
Contributor	Savorgnano, Pietro, fl. 1523-1530. Charles V, Holy Roman Emperor, 1500-1558.
Date Issued	1524
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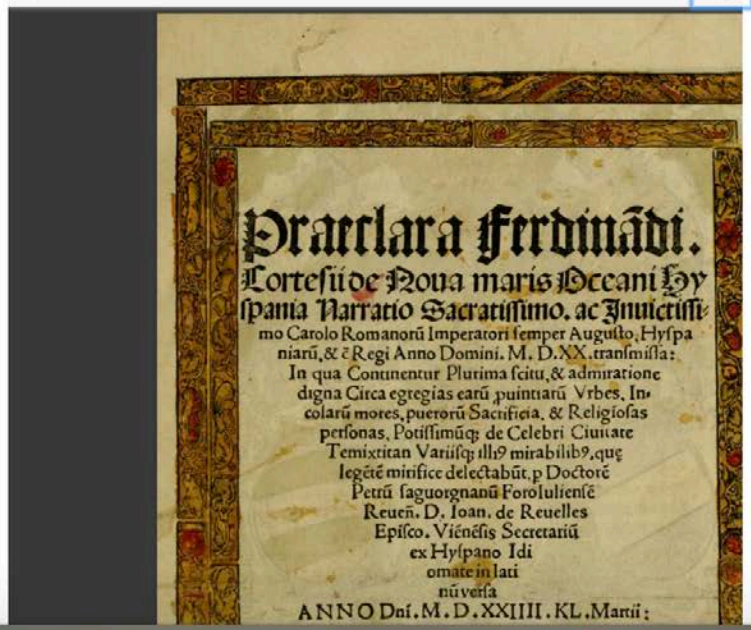

Praeclara Ferdinãdi.
Cortesii de Noua maris Oceani Hy
ſpania Narratio Sacratiſſimo. ac Inuictiſſi
mo Carolo Romanorũ Imperatori ſemper Augusto, Hyſpa
niarũ, & c̃ Regi Anno Domini. M. D.XX. tranſmiſſa:
In qua Continentur Plurima ſcitu, & admiratione
digna Circa egregias earũ ,puintiarũ Vrbes, In-
colarũ mores, puerorũ Sacrificia, & Religioſas
perſonas, Potiſſimũq; de Celebri Ciuitate
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ex Hyſpano Idi
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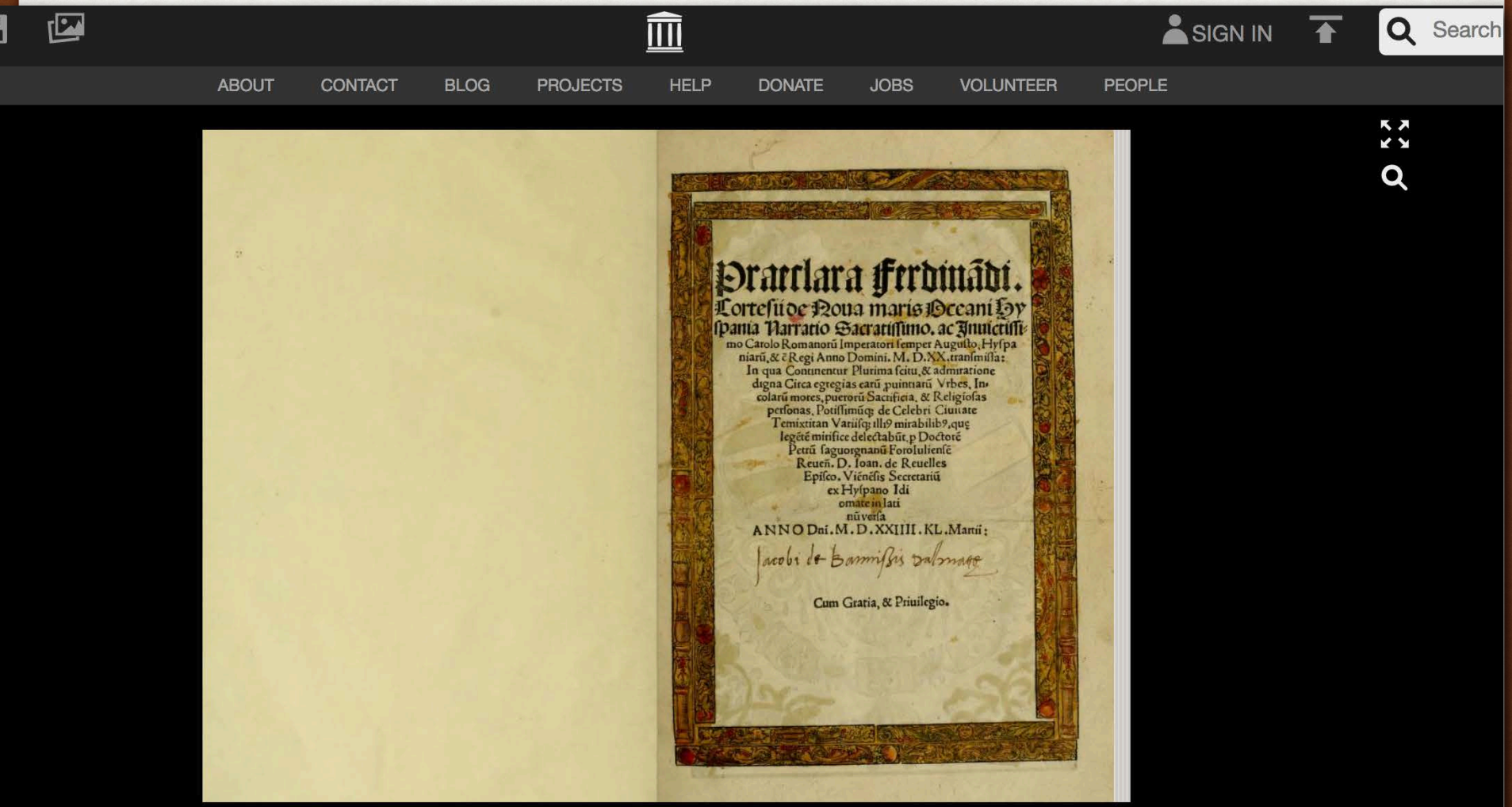

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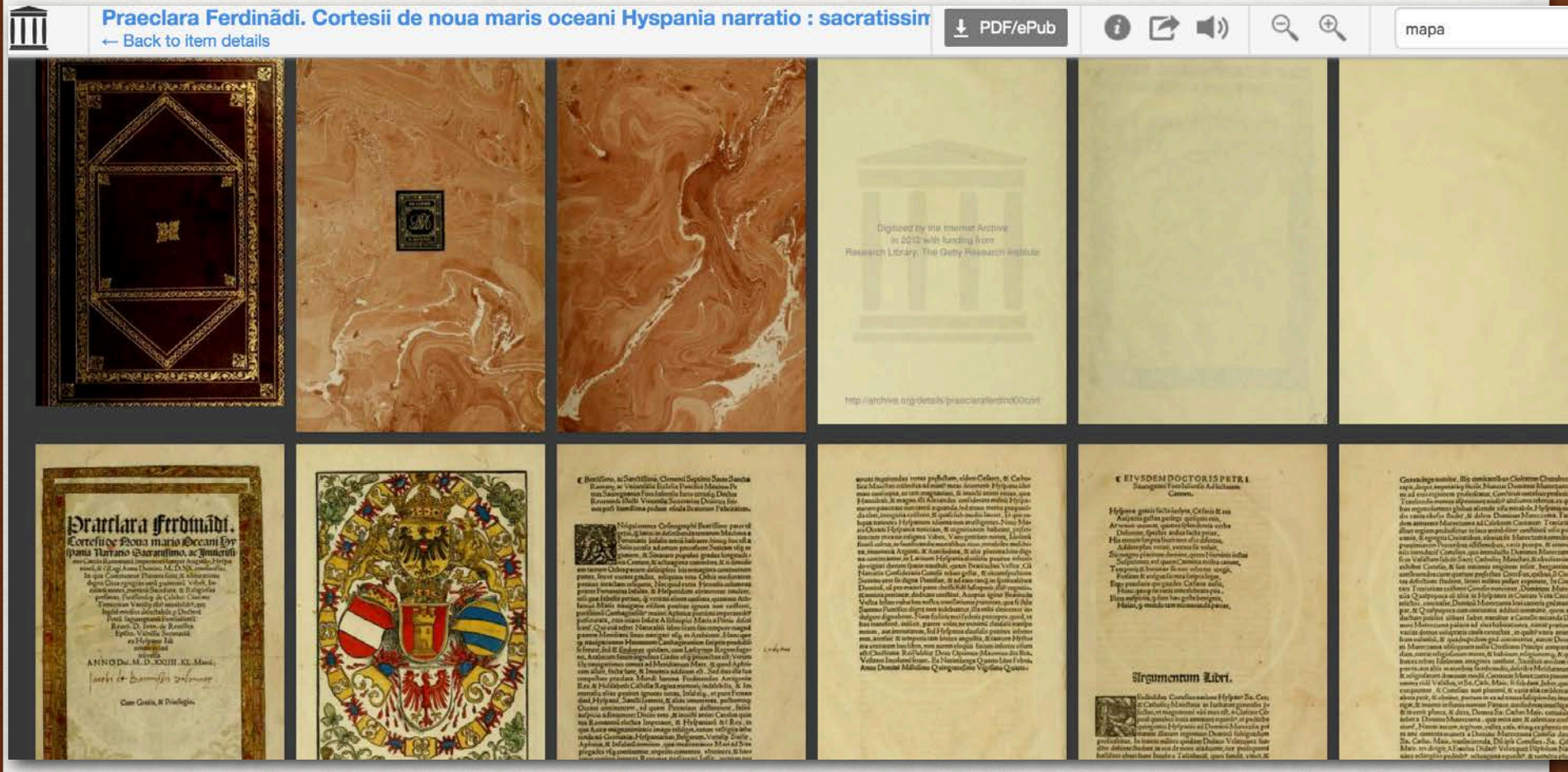

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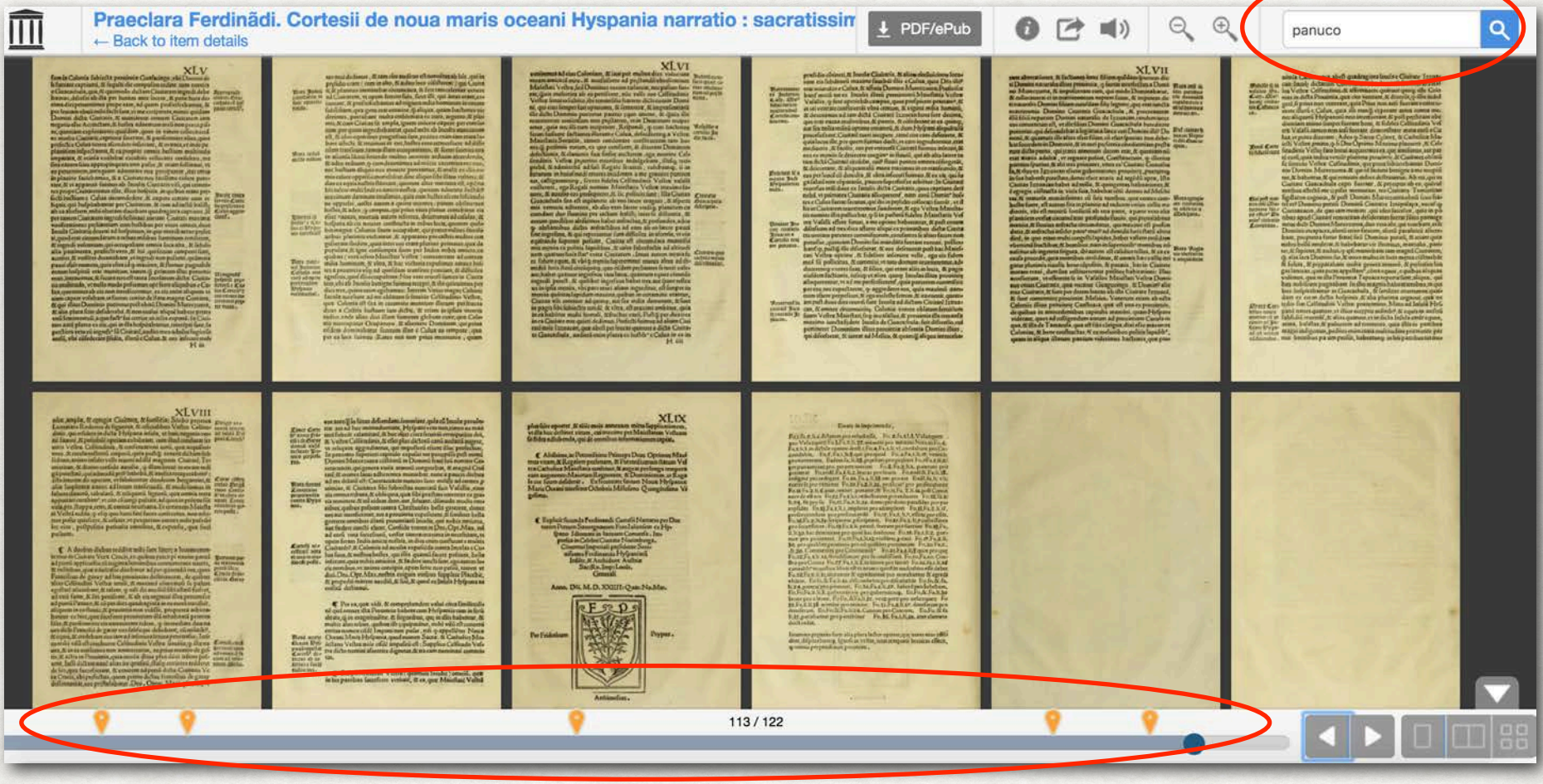

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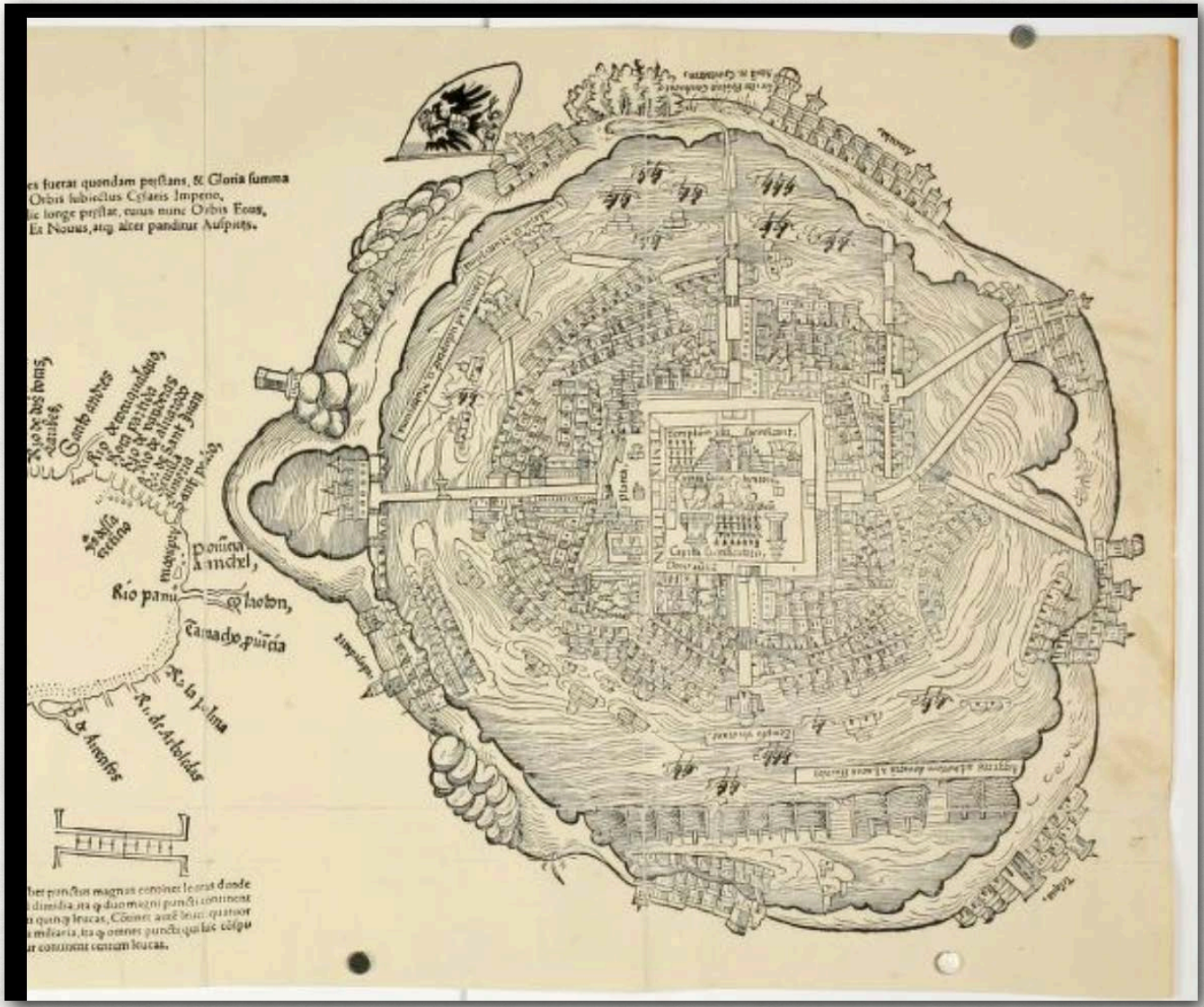

Digital Projects—Why bother?

Information technology makes it possible to frame research questions in a computational way, to use electronic tools and new research methods to work (and collaborate!) more efficiently, and to ask new kinds of questions.

It also facilitates sharing of both raw data and research findings—*if data and metadata are carefully and thoughtfully formatted.*

The “Visible Web” versus the “Deep Web”

- The Visible Web is what you see in the results pages from commercial search engines like Google.
- The Invisible or Deep Web consists of data from dynamically searchable databases that are not automatically indexed by search engines, because they are not static HTML pages that “live” somewhere—they are created on the fly when a user does a search.

METADATA FOR THE WEB

- The Web is not a “library”!
- Web searching is very hit-and-miss
- Some “places” for Web metadata exist, but not all institutions implement them consistently:
  - TITLE HTML tag
  - DESCRIPTION META tag
  - KEYWORDS META tag
  - “No index, no follow” META tag

METADATA FOR THE WEB *CONTINUED*

The most important elements for search engine optimization (SEO) are:

- The HTML “TITLE” TAG (appears at the top of a web page, and is used to bookmark the page)
- The actual indexable text on the page
- Referring links (the Google “popularity contest”)

Speaking of the Web…

- Will your digital resource be "reachable" by commercial search engines?
- If yes, how will you "contextualize" individual objects?
- If not, what is your strategy to lead Web users to your main page/search page?

Order from Chaos: The Pieces of the Puzzle

- Data (aka “metadata”)
- Assets (e.g., images, media files, texts, bibliography, etc.)
- People (with clearly defined roles)
- Skill sets (e.g. cataloging, TEI markup, software administration, database management, copy editing, Web writing/editing, interface/UX design)
- <u>Standards!</u>

The Pieces of the Puzzle, *continued*

- ❑ Appropriate software AND software support
- ❑ Institutional support
- ❑ A project manager!
- ❑ Physical & virtual space to work, and an institutional "venue" to publish research and supporting data, and to maintain (or, eventually, "retire") resources

WHAT IS METADATA?

- “Metadata” is often used interchangeably (and confusingly) with “data.”
- “Metadata” is often used to refer to meta tags on HTML pages on the Web.
- “Metadata” (like “data”) is a plural word, but usually used as if it were singular.

WHAT IS METADATA?

A structured description of the essential attributes of an information object. (Tony Gill, Chapter 2, *Introduction to Metadata* 3.0)

Metadata is normally structured to model the most important attributes of the class of information objects being described (e.g., the MARC format).

WHAT IS METADATA?

Metadata is structured information associated with an object for purposes of discovery, description, use, management, and preservation.

from the NISO *Framework of Guidance for Building Good Digital Collections*, 3.0.

TYPES OF METADATA

- *Administrative*: for managing and administering information resources (e.g. location information, version control)
- *Descriptive*: for the description or identification of information resources (e.g. specialized indexes, finding aids, individual object records)

TYPES OF METADATA (CONT.)

- *Preservation*: for the preservation management of information resources (e.g. documentation of data "refreshing" and migration)
- *Technical*: related to how a system functions or how metadata behaves (e.g. hardware and software documentation, tracking of system response times)
- *Use:* (e.g. use and user tracking, usability studies)

WHY IS METADATA IMPORTANT?

- for enhanced accessibility, in multiple “places”
- for retention of context
- for expanding use & sharing
- for multi-versioning
- for legal issues
- for preservation of data

"RE-CONTEXTUALIZED" METADATA: EXAMPLES OF METADATA IN A "FEDERATED" CONTEXT

In addition to the presence of metadata on an institution's own website, and in the local OPAC, metadata can (and should) be shared in a variety of "union" environments, e.g.:

- WORLDCAT
- OCLC ART RESOURCE DISCOVERY GROUP CATALOGUE
- ARCHIVES GRID
- GOOGLE!

Information standards and controlled vocabularies can help extricate us from our metadata dilemmas…

DON'T GO INTO THIS BLINDFOLDED!

- What is the focus of your project, and what research questions do you want to ask?
- Where will your data come from?
- What is your source of labor?
- What are the intended users and uses?
- What is your data model?
- What standards will you follow?
- What will be the end-product?
- Where will your end-product "live"?
- How will users find it?

Allegory of Fortune

Enlarge Download (22MB) Zoom in

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Dosso Dossi
Italian, about 1530
Oil on canvas
70 1/2 x 85 1/2 in.
89.PA.32

Currently on view at
The Getty Center Los Angeles

What is a "record"?

Allegory of Fortune

Enlarge

Object Number: 89.PA.32
ObjectID: 943
Dept: Paintings
Permanent Collection

audio:
Audio: An Allegory of Fortune [open file]

Artist/Maker(s):
Dosso Dossi (Giovanni di Niccolò de Lutero) [Italian (Ferrarese), about 1490 - 1542]

Culture: Italian

Place Created: Italy
⊞ Full Geography

Classification/Object Type: Paintings/Painting

Medium: Oil on canvas

Date: about 1530

Dimensions: Unframed: 179.1 x 217.2 cm (70 1/2 x 85 1/2 in.) Framed: 214.6 x 228.6 x 8.9 cm (84 1/2 x 90 x 3 1/2 in.)

Description:
⊞ GettyGuide™ Description

Current Location:
Center, Museum, North Pavilion, Gallery N205

Provenance:

- 1624	Possibly Cardinal Alessandro d'Este [Modena, Italy]
	Litta Collection [Milan, Italy]
- 1989	Private Collection [New England] (sold, Christie's, New York, January 11, 1989, lot 192, to Hazlitt, Gooden and Fox Ltd., London.)
1989	Hazlitt, Gooden & Fox Ltd., sold to the J. Paul Getty Museum, 1989.

Exhibition History:
"La prima donna del mondo": Isabella d'Este, Fürstin und Mäzenatin der Renaissance (February 13 to

Statue of Bes #SN

Montagny's Drawing

Drawing Creator ULAN Reference: Montagny, Elie-Honoré

Image ID: montagny_14v_7b
Leaf Number: 14

Side: Verso

Location on page: Leaf 14v, bottom right of the page
Page orientation: Vertical
Inscription: [missing] Cephallus
[missing]-se de la fertilité
[missing]-ne
galerie du palais
Verospi antique
en marbre 2 pieds
de haut

Object Depicted

Title: Bes
Online Record of object: Fitzwilliam Museum - GR.1.1818
AAT Reference: statuesmarble (rock)

Object type: Sculpture
Source object dimensions: 27 × 28.5 × 59.5 cm
Material: Marble
Date: 117
Period: 117-250
Current Location (TGN Reference):
United Kingdom (nation) › Cambridge (inhabited place) › Fitzwilliam Museum

Iconography: Bes
Current inventory no.: GR.1.1818
Provenance: (2nd) Palazzo Verospi, Rome
Archaeological findspot: Rome, Fountain

Category:	figure
Name:	statue
Date:	117 – 250
Period:	Middle Roman
Description:	Bes, from a fountain
Production Place (legacy):	Italy, production, country
Production Note:	carved
Find Spot:	Rome
Material:	marble (Luna)
Dimension(s):	depth, 27, cm height, 59.5, cm width, 28.5, cm
Acquisition:	given; 1818; Gregory, Abraham Edward
Documentation:	**Vassilika, E..** 1998. *Greek and Roman Art.* p.106-107, no.51 **Reinach, S..** 1930. *Répertoire de la statuaire grecque et romaine.* 1, 419 **Ashton, S.A..** 2004. *Roman Egyptomania*.London: Golden House Publicationsp. 174 & 175
Accession:	Object Number: **GR.1.1818** (Antiquities) (record id: 65448; input: 2003-03-25; modified: 2012-01-13)
Permanent Identifier:	http://data.fitzmuseum.cam.ac.uk/id/object/65448

Descriptive metadata records for an image in 19th-century album, the object depicted, and link to object on current repository's website (from the INHA "Digital Montagny" project)

A Typology of Data Standards

(from *Introduction to Metadata*)

Type of Data Standard	Examples
Data structure standards (metadata element sets, schemas). These are "categories" or "containers" of data that make up a record or other information object.	*the set of MARC (Machine-Readable Cataloging format) fields, Encoded Archival Description (EAD), Dublin Core Metadata Element Set (DCMES), Categories for the Description of Works of Art (CDWA), VRA Core Categories*
Data value standards (controlled vocabularies, thesauri, controlled lists). These are the terms, names, and other values that are used to populate data structure standards or metadata element sets.	*Library of Congress Subject Headings (LCSH), Library of Congress Name Authority File (LCNAF), LC Thesaurus for Graphic Materials (TGM), Medical Subject Headings (MeSH), Art & Architecture Thesaurus (AAT), Union List of Artist Names (ULAN), Getty Thesaurus of Geographic Names (TGN), ICONCLASS*
Data content standards (cataloging rules and codes). These are guidelines for the format and syntax of the data values that are used to populate metadata elements	*Anglo-American Cataloguing Rules (AACR), Resource Description and Access (RDA), International Standard Bibliographic Description (ISBD), Cataloging Cultural Objects (CCO), Describing Archives: A Content Standard (DACS)*
Data format/technical interchange standards (metadata standards expressed in machine-readable form). This type of standard is often a manifestation of a particular data structure standard (type 1 above), encoded or marked up for machine processing.	*MARC21, MARCXML, BIBFRAME, EAD XML DTD, METS, MODS, CDWA Lite XML schema, Simple Dublin Core XML schema, Qualified Dublin Core XML schema, VRA Core 4.0 XML schema*

RELATIONSHIP BETWEEN "RECORDS" AND CONTROLLED VOCABULARIES: DATA "STRUCTURES" POPULATED WITH DATA "VALUES"

DETERMINING WHAT METADATA IS NEEDED

- Who are your users? (current as well as potential) (e.g., library or registrarial staff, curators, professors, advanced researchers, students, general public)
- What information do you already have (even if it's only on index cards)?
- What information is already in automated form?
- What metadata categories & vocabulary tools are you currently using? Are they adequate for all potential uses and users? Do they map to any standard?

WHAT DATA DO YOU NEED?

- What common or core data is needed?
- What data do your various user groups need?
- What established metadata standards (e.g., MARC, METS, EAD, Dublin Core, VRA Core, LIDO) might fit the information needs of your collections and/or institution and your USERS?

DATA STANDARDS: ESSENTIAL STEPS

First Step: Select and Use Appropriate Metadata Element Sets

Data Structure Standards

(a.k.a. metadata standards)

- ✓ Guidelines for the structure of information systems: What elements should a database include?
- ✓ Meant to be customized according to institutional and/or project needs.
- ✓ MARC, EAD, MODS, Dublin Core, LIDO, VRA Core are examples of data structure standards.

Second Step: Select and Use Vocabularies, Thesauri, Classifications, and "Folksonomies"

Data Value Standards

- ✓Data values are used to "populate" or fill metadata elements
- ✓ Examples are LCSH, AAT, TGM, MeSH, etc. , as well as "local" vocabularies

Data Value Standards *continued*

- ✓ Used as controlled vocabularies or authorities to assist with documentation and cataloguing.
- ✓ Used as research tools—vocabularies contain rich information and contextual knowledge.
- ✓ Used as search assistants in database retrieval systems and online collections.

Third Step: Follow Guidelines for Documentation

Data Content Standards

- ✓ Best practices for documentation (i.e., implementing data structure and data value standards)
- ✓ Rules for the selection, organization, and formatting of content.
- ✓ AACR (*Anglo American Cataloguing Rules)*, RDA (*Resource Description and Access*, the successor to AACR), DA:CS (*Describing Archives: A Content Standard*), CCO (*Cataloging Cultural Objects)*

Fourth Step:

Select the Appropriate Format for Expressing Data

DATA FORMAT STANDARDS

- ✓ How will you “publish” and share your data in electronic form?
- ✓ How will service providers obtain, add value, and disseminate your data?
- ✓ Candidates are Dublin Core XML; MARC21; MARC XML; VRA XML schema; LIDO XML schema; MODS, etc. And more recently—Linked Open Data (LOD).

Looking at a tried-and-true metadata standard for libraries:

MARC

MARC (MACHINE-READABLE CATALOGING) FORMAT

- MARC is the technical "container" for the data in a bibliographic record (both a data structure and a data format standard)
- MARC records are formulated according to the Anglo-American Cataloguing Rules, 2nd edition, 1988 revision (AACR2), and now according to Resource Description and Access (RDA)
- MARC can be used to catalog books, audiovisual materials, sound recordings, computer files, and archival materials

  http://lcweb.loc.gov/marc/

VOYAGER[visual materials[1,1016,2,3,3,3,4,2,5,100,6,1]] (17-1) - Netscape

File Edit View Go Communicator Help

Library of Congress MARC record

```
001 11682823
005 19961211161301.3
007 kh||||
007 cr |||
008 960917s1939    xx nnn            kn
035   $9(DLC)   96519057
906   $ap$bcbc$corignew$du$encip$f19$gy-printpho
955   $aqw05
010   $a   96519057
037   $aLC-USZ62-117128$bDLC$c(b&w film copy neg.)
040   $aDLC$cDLC$egihc
050 [illegible]$aLOT 13085, no. 20 $b
245 00$a[African American man and woman at small stove]$h[graphic].
[illegible]   $c[between 1939 and 1958]
300   $a1 photographic print.
500   $aWPA Federal Theatre photograph.
500   $aForms part of: Visual Materials from the National Association for the
   Advancement of Colored People Records.
555 8 $aCollection finding aid available.
540   $aPublication of some images may be restricted. For information see LC
   P&P Restrictions Notebook.
650 [illegible]$aAfro-Americans$xDomestic life$y1930-1960
655  7$aPhotographic prints$y1930-1960.$2gmgpc
856 7 $5b&w film copy neg.$dcph$f2c117128$bfile
953   $aTE01
985   $app/cph
991   $bc-P&P$hLOT 13085, no. 20 $i$mUSE MICROFILM$vobj.$wMUMS VM File
991   $bc-P&P$hLC-USZ62-117128 (b&w film copy neg.)$wMUMS VM File
```

Labeled display | Previous Record | Next Record | Brief Record Display | New Search

Document: Done

Start 1:30 PM

VOYAGER[visual materials[1,1016,2,3,3,3,4,2,5,100,6,1]] (17-1) - Netscape

File Edit View Go Communicator Help

Records 17 through 17 of 1023 returned.

```
Title:          [African American man and woman at small stove]
                   [graphic].
Published:      [between [illegible] and 1950]
Description:    1 photographic print.
LC Call No.:    LOT 13085, no. 20
Notes:          WPA Federal Theatre photograph.
                Forms part of: Visual Materials from the National
                   Association for the Advancement of Colored People Records.
                Collection finding aid available.
                Publication of some images may be restricted. For
                   information see LC P&P Restrictions Notebook.
Availability:   LC-USZ62-117128 DLC (b&w film copy neg.)
Subjects:       [illegible] 1930-1960.
                Photographic prints -- 1930-1960. gmgpc
Control No.:    [illegible]
Access:         b&w film copy neg.
```

Tagged display | Previous Record | Next Record | Brief Record Display | New Search

---

This display was generated by the CNIDR Web-Z39.50 gateway, version 1.08, with Library of Congress Modifications.

Document: Done

Start | 1:32 PM

Brief display of previous LC MARC record, with human-readable field labels instead of alphanumeric indicators.

MARC records can also be expressed in XML format:

See http://www.loc.gov/standards/marcxml/

Mozilla Firefox

File Edit View Go Bookmarks Tools Help

"Classic" MARC record

000

001 92005291

003 DLC

005 19930521155141.9

008 920219s1993 caua j 000 0 eng

010 |**a** 92005291

020 |**a**0152038655 :|**c**$15.95

040 |**a**DLC|**c**DLC|**d**DLC

042 |**a**lcac

050 00|**a**PS3537.A618|**b**A88 1993

082 00|**a**811/.52|**2**20

100 1 |**a**Sandburg, Carl,|**d**1878-1967.

245 10|**a**Arithmetic /|**c**Carl Sandburg ; illustrated as an anamorphic adventure by Ted Rand.

250 |**a**1st ed.

260 |**a**San Diego :|**b**Harcourt Brace Jovanovich,|**c**c1993.

300 |**a**1 v. (unpaged) :|**b**ill. (some col.) ;|**c**26 cm.

500 |**a**One Mylar sheet included in pocket.

520 |**a**A poem about numbers and their characteristics. Features anamorphic, or distorted, drawings which can be restored to normal by viewing fro particular angle or by viewing the image's reflection in the provided Mylar cone.

650 0|**a**Arithmetic|**x**Juvenile poetry.

650 0|**a**Children's poetry, American.

650 1|**a**Arithmetic|**x**Poetry.

650 1|**a**American poetry.

650 1|**a**Visual perception.

700 1 |**a**Rand, Ted,|**e**ill.

Mozilla Firefox

File Edit View Go Bookmarks Tools Help


```
  </datafield>
- <datafield tag="100" ind1="1" ind2=" ">
    <subfield code="a">Sandburg, Carl,</subfield>
    <subfield code="d">1878-1967.</subfield>
  </datafield>
- <datafield tag="245" ind1="1" ind2="0">
    <subfield code="a">Arithmetic /</subfield>
  - <subfield code="c">
      Carl Sandburg ; illustrated as an anamorphic adventure by Ted Rand.
    </subfield>
  </datafield>
- <datafield tag="250" ind1=" " ind2=" ">
    <subfield code="a">1st ed.</subfield>
  </datafield>
- <datafield tag="260" ind1=" " ind2=" ">
    <subfield code="a">San Diego :</subfield>
    <subfield code="b">Harcourt Brace Jovanovich,</subfield>
    <subfield code="c">c1993.</subfield>
  </datafield>
- <datafield tag="300" ind1=" " ind2=" ">
    <subfield code="a">1 v. (unpaged) :</subfield>
    <subfield code="b">ill. (some col.) ;</subfield>
    <subfield code="c">26 cm.</subfield>
  </datafield>
- <datafield tag="500" ind1=" " ind2=" ">
    <subfield code="a">One Mylar sheet included in pocket.</subfield>
  </datafield>
- <datafield tag="520" ind1=" " ind2=" ">
  - <subfield code="a">
      A poem about numbers and their characteristics. Features anamorphic, or distorted, drawings which can be restored to normal by viewing from a
      particular angle or by viewing the image's reflection in the provided Mylar cone.
```


MARC XML record

Done

MODS:

RICHER THAN DUBLIN CORE, SIMPLER THAN MARC

METS:

A METADATA “WRAPPER” FOR DIGITAL INFORMATION OBJECTS

METS

(Metadata Encoding & Transmission Standard)

METS is an XML schema designed for creating XML document instances that express the complex structure of digital objects, the names and locations of the files that comprise those objects, and the associated metadata.

DUBLIN CORE:
"METADATA WITHOUT PAIN"?

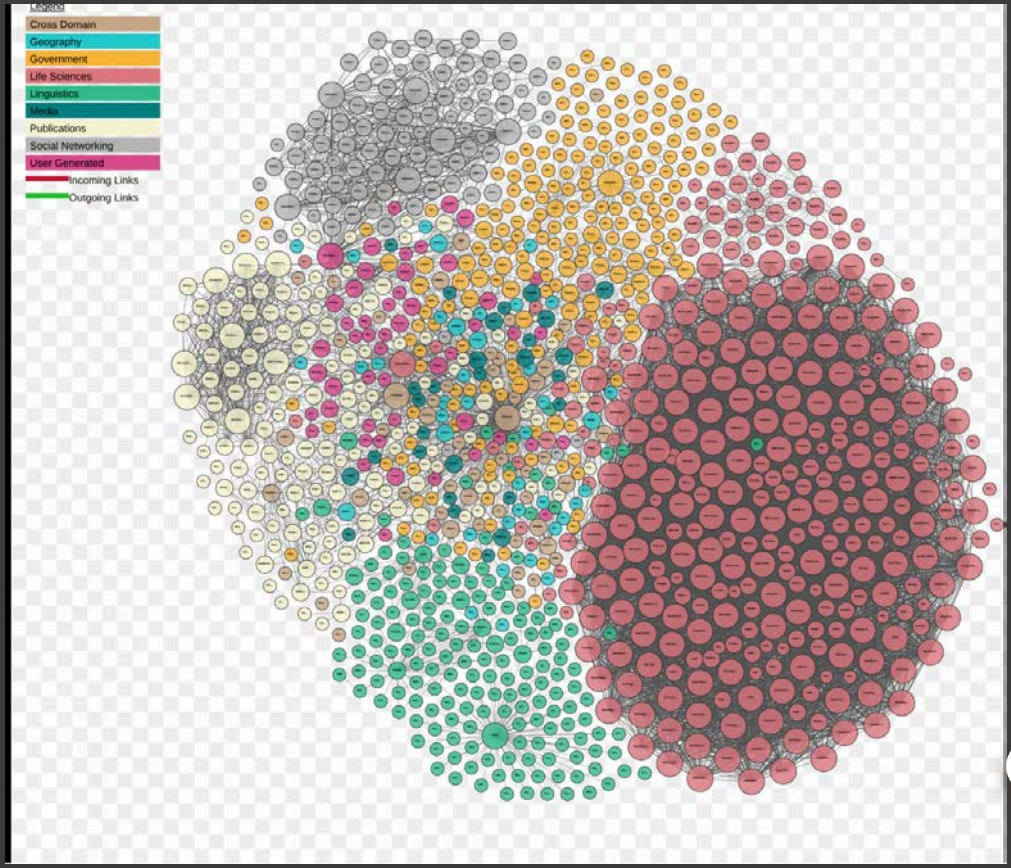
Dublin Core Metadata Initiative®

Making it easier to find information.

WHY IS DUBLIN CORE SO PREVALENT?

- Dublin Core is the basic required metadata schema for OAI metadata harvesting
- DC is widely used in “aggregated” resources and for metadata mapping/crosswalks (e.g. Getty Research Portal: http://portal.getty.edu/)
- “Lowest common denominator”
- The format is incorporated into systems such as CONTENTdm (http://www.oclc.org/en-US/contentdm.html) and Omeka (https://omeka.org/)

LINKED OPEN DATA (LOD): THE HOLY GRAIL FOR CONNECTING & SHARING METADATA FOR RE-USE & RE-PURPOSING?



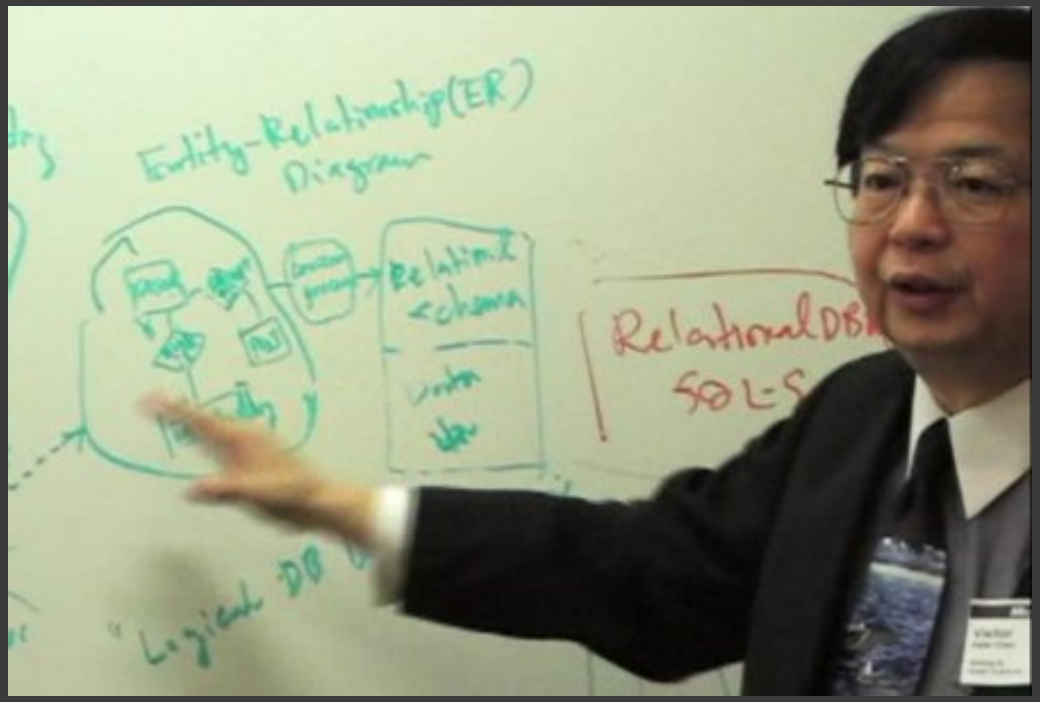
linkeddata.org

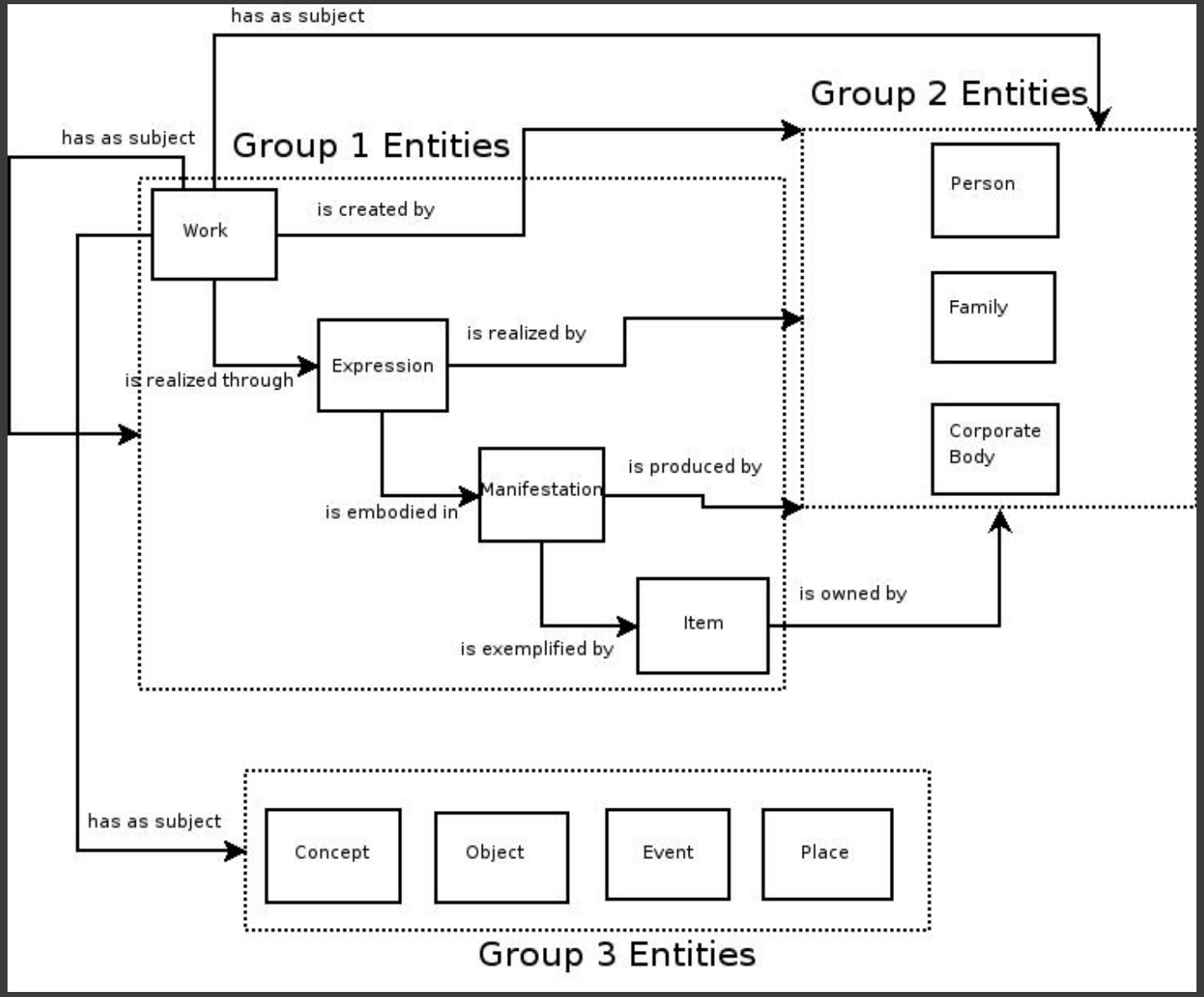
THINKING ABOUT AND VISUALIZING DATA AND RELATIONSHIPS: ENTITY-RELATIONSHIP MODELS

ENTITY-RELATIONSHIP MODEL

— first posited by Peter Chen of M.I.T. in 1976

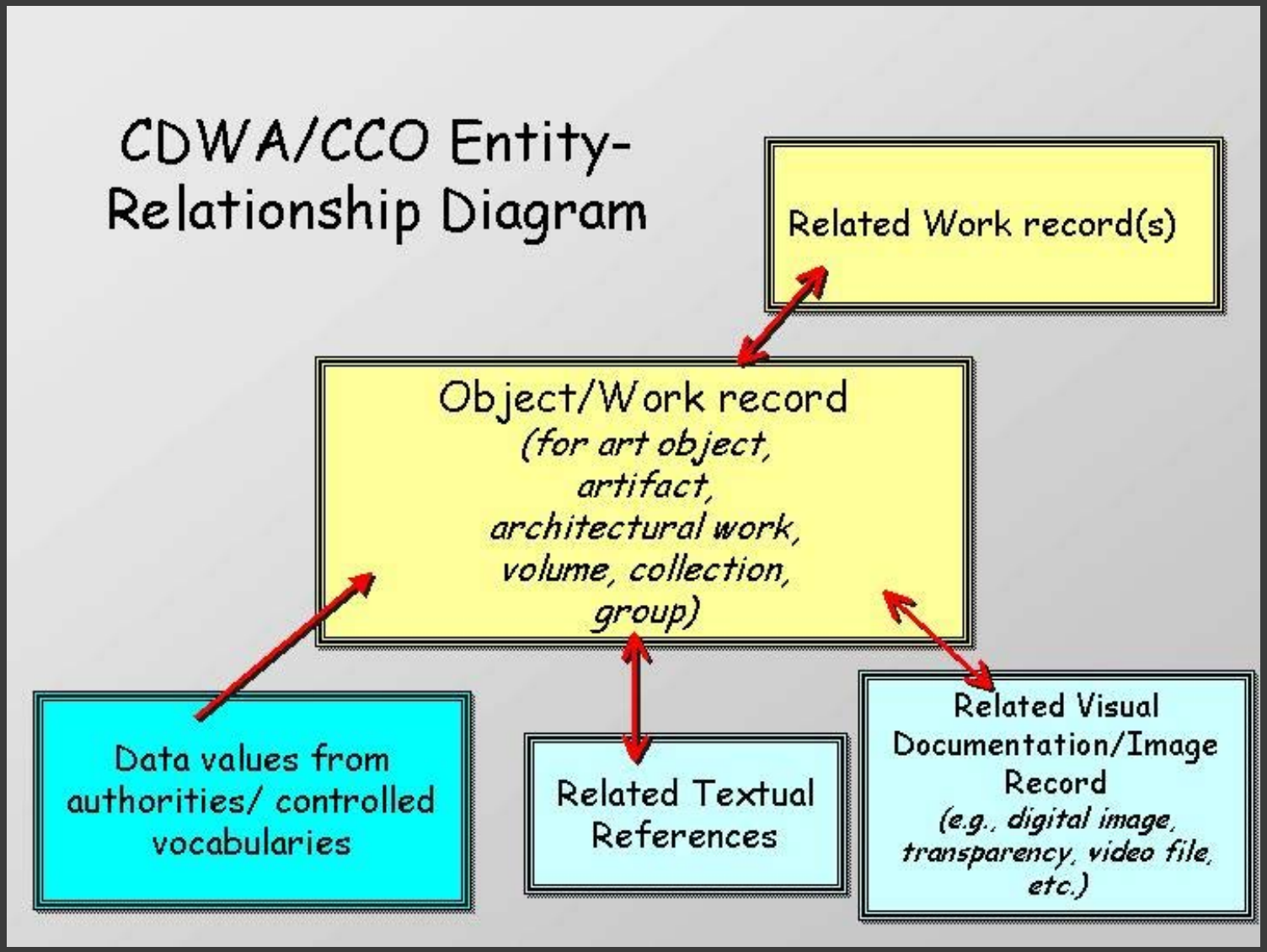
http://portal.acm.org/citation.cfm?id=320440#abstract





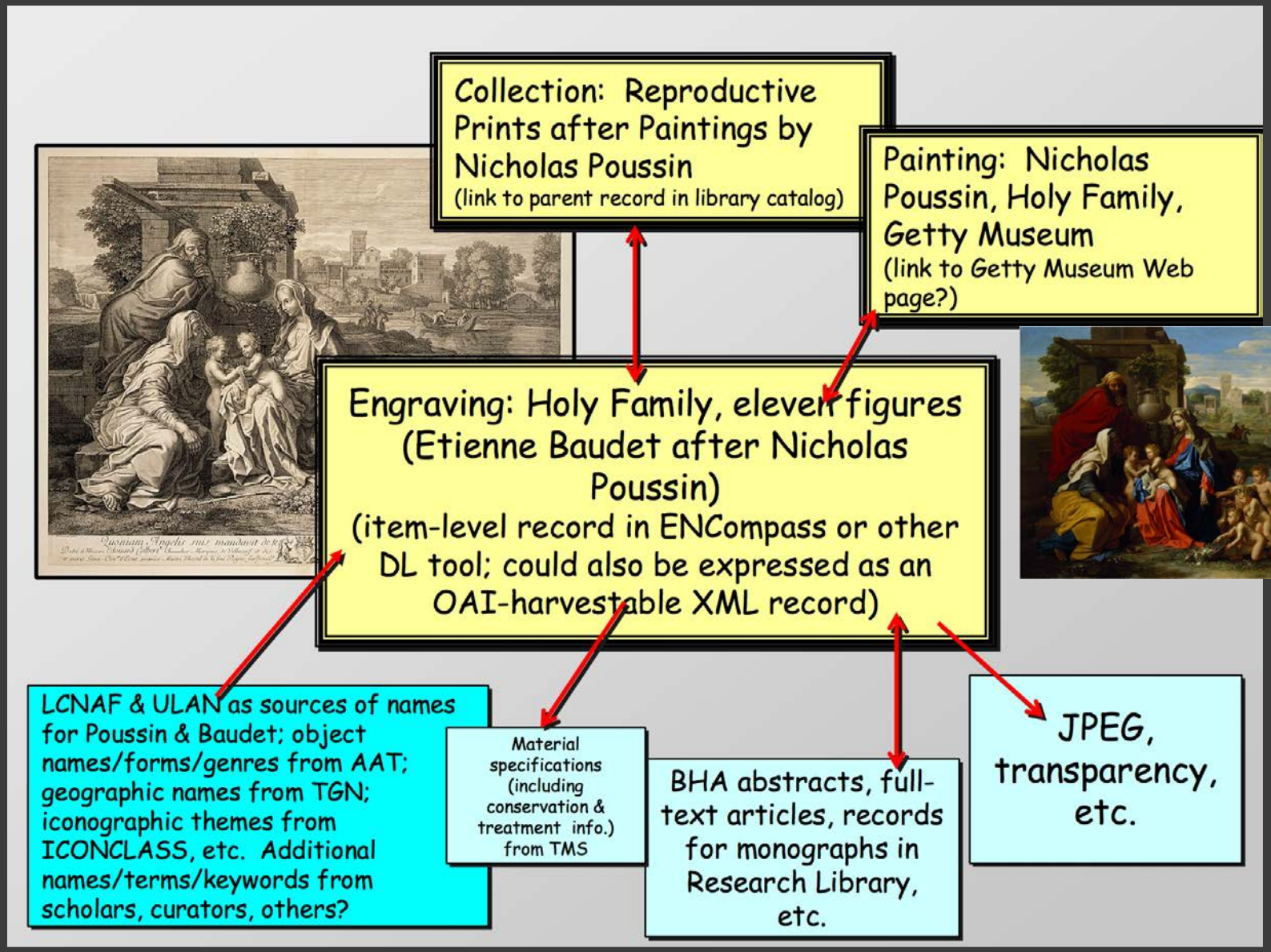
FRBR (Functional Requirements for Bibliographic Records)

Entity-Relationship Diagram

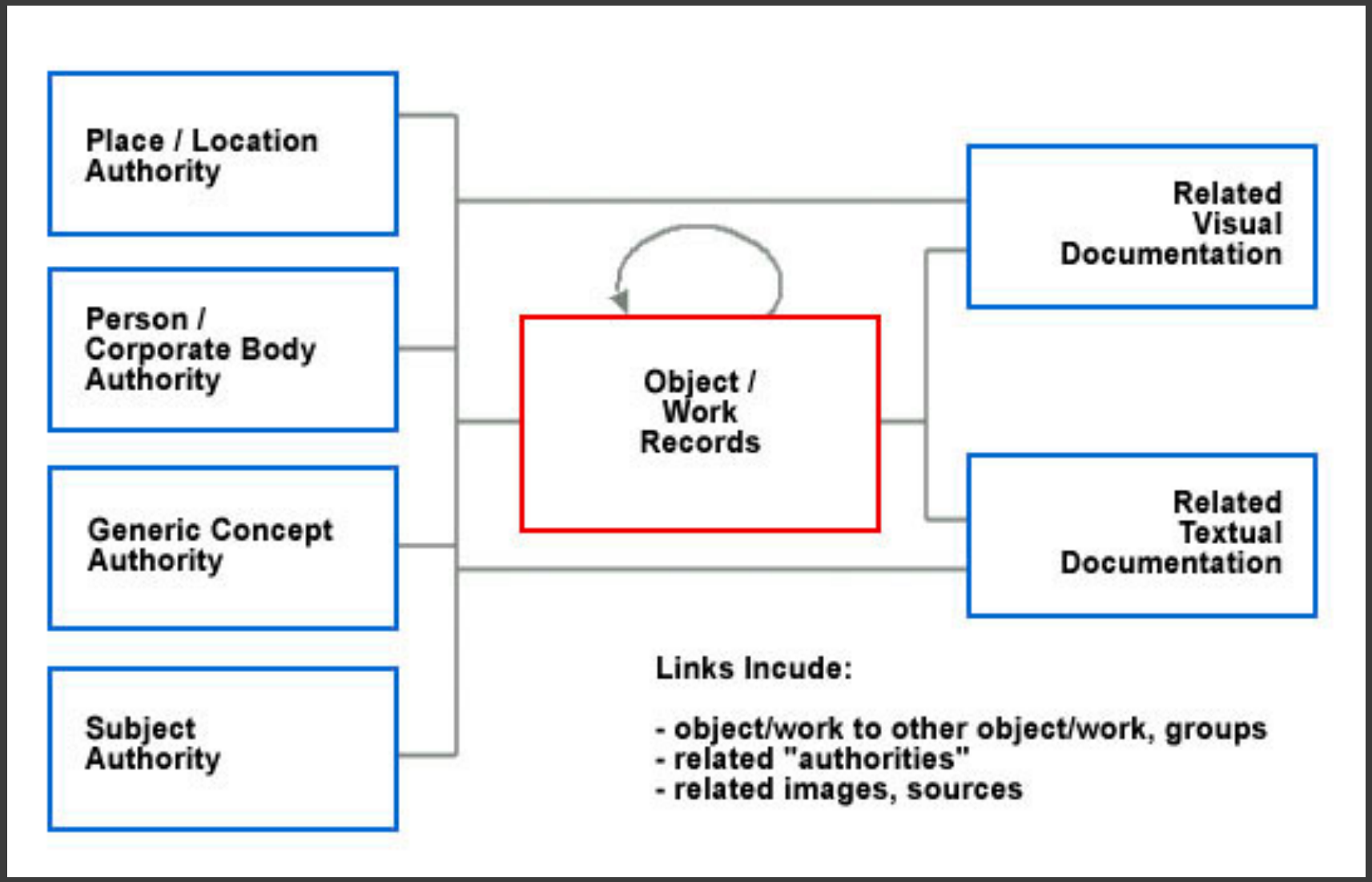


Cataloging Cultural Objects/CDWA

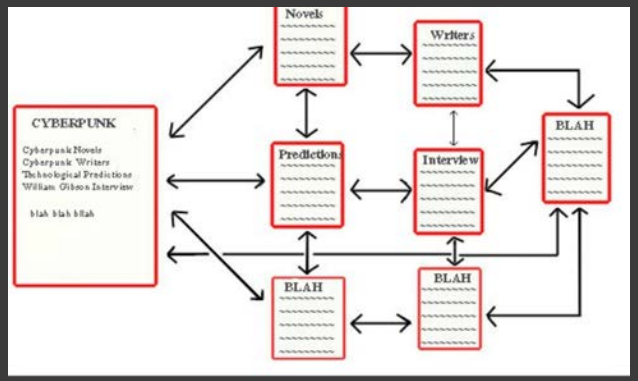
Entity-Relationship Diagram

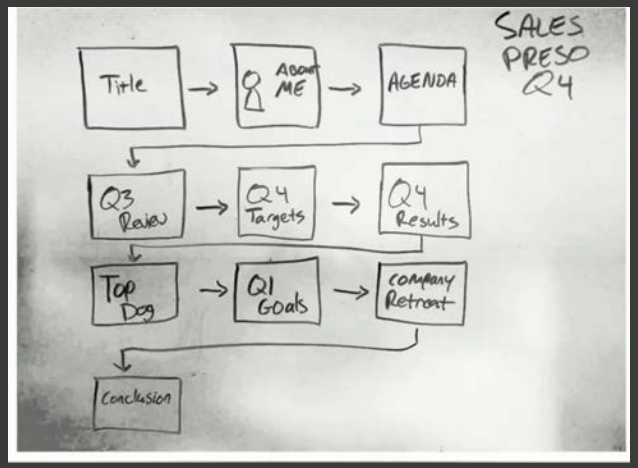


Entity-relationship diagram of information and resources relating to item from Getty Research Institute Special Collections

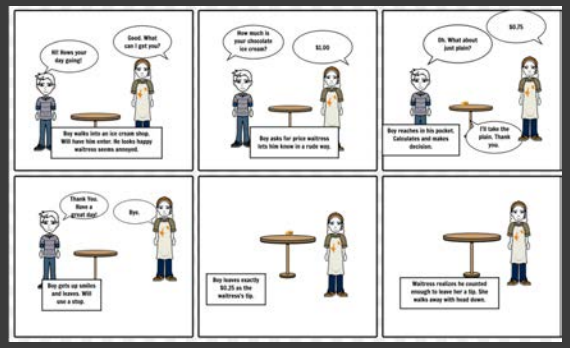


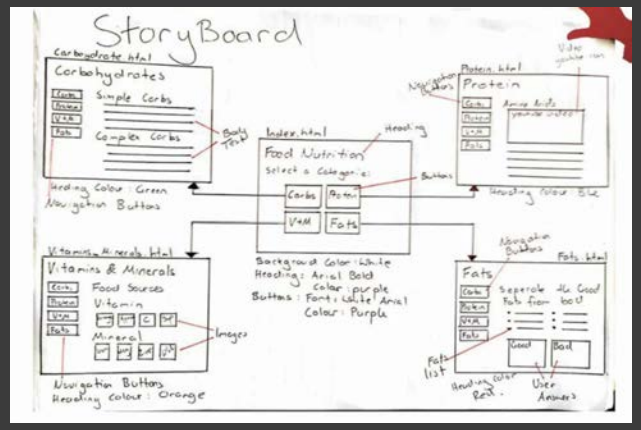
Another simple visualization of the CCO/CDWA Entity-Relationship Model, stressing the use of authorities (aka controlled vocabularies)





storyboard
a sequence of drawings &/or graphics, typically with some directions & dialogue or captions, representing the shots planned for a movie or television production, or a project.



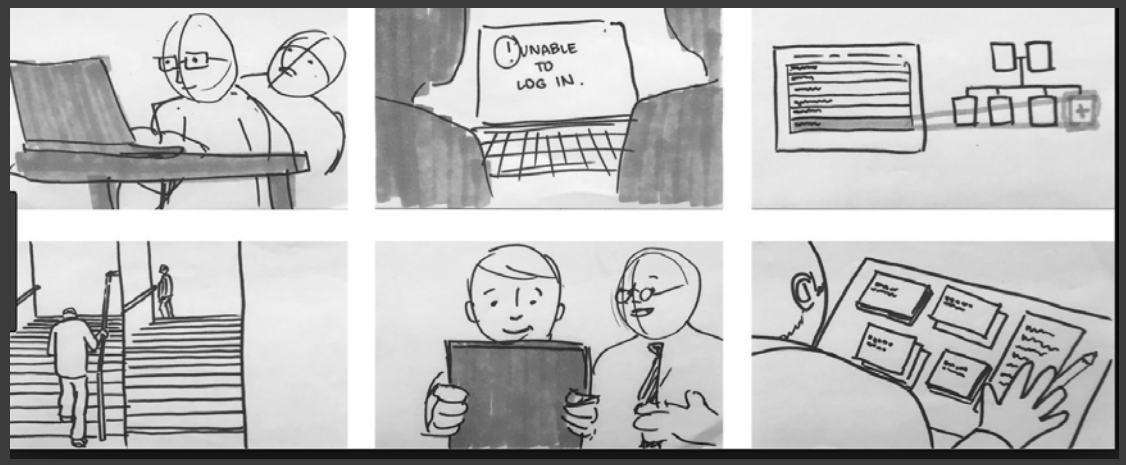


Main Points to Address in the Class Exercise & Presentation

- What type of resource are you producing? (e.g. searchable database, interactive website, data repository, digital publication, collection of digital objects, something else)
- Who are your intended users, and what do you expect they will want to do with your resource?
- What metadata standard(s) will you use, and why?
- What controlled vocabularies or thesauri will you use, and why? —Will you also use "folksonomies," or user-generated terms?
- Will your resource be "open content," and if so, what issues will you need to address? How will you make your metadata "shareable?" and "re-usable"?

Main Points to Address *continued*

- Will the data for your digital resource be re-purposed from an existing source, reformatted/scrubbed, created from scratch, or a combination?
- What is your strategy for the discoverability of your resource? (e.g. from search engines like Google and/or online catalogs like Worldcat). Will your resource be discoverable in multiple "places"?
- What resources (human, technical, monetary) will you need to build your resource?
- How will your resource be maintained and, if appropriate, updated or "retired?
- How will you measure success?



Over to you!