Linking the Getty Vocabularies:
The Content Perspective, Including an Update on CONA

Patricia Harpring
Managing Editor, Getty Vocabulary Program

for joint Pacific Neighborhood Consortium – Digital Heritage 2018
San Francisco

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Find the Getty Vocabs Online

- For information about the Getty vocabularies, see this site
- Search the data, access data releases, how to contribute, editorial guidelines, training materials, news
- Contact us: vocab@getty.edu

http://www.getty.edu/research/tools/vocabularies/index.html

The Getty Research Institute

Search Tools & Databases
- Prime Search
- Getty Research Portal
- Collection Inventories & Finding Aids
- Photo Archive
- Research Guides & Bibliographies
- Digital Collections
- Article & Research Databases
- Collecting & Provenance Research
- EHA & RILA

Getty Vocabularies
- Art & Architecture Thesaurus (AAT)®
- Cultural Objects Name Authority (CONA)®
- Getty Thesaurus of Geographic Names (TGN)®
- Union List of Artist Names (ULAN)®
- Contribute
- Editorial Guidelines
- Getty Vocabularies as Linked Open Data
- Frequently Asked Questions
- Obtain the Getty Vocabularies
- Training Materials

The Getty Vocabularies are now available as Linked Open Data. Learn more.

What is it? What is it? The Getty vocabularies contain structured terminology for art, architecture, decorative arts, archival materials, visual surrogates, conservation, and bibliographic materials. Compliant with international standards, they provide authoritative information for catalogers, researchers, and data providers. The vocabularies grow through contributions. In the new linked, open environments, they provide a powerful conduit for research and discovery for digital art history. To search the vocabularies, click on the links below.

The Art & Architecture Thesaurus (AAT)®
Catherine wheel or rose window? AAT is a structured vocabulary, including terms, descriptions, and other metadata for generic concepts related to art, architecture, conservation, archaeology, and other cultural heritage. Included are work types, styles, materials, techniques, and others.

The Getty Thesaurus of Geographic Names (TGN)®
Thebes or Ægisthos? TGN is a structured vocabulary, including names, descriptions, and other metadata for extant and historical cities, empires, archaeological sites, and physical features important to research of art and architecture. TGN may be linked to GIS, maps, and other geographic resources.

The Cultural Objects Name Authority (CONA)®
Mona Lisa or La Gioconda? CONA compiles titles, attributions, depicted subjects, and other metadata about works of art, architecture, and other cultural objects.

The Union List of Artist Names (ULAN)®
Titan or Titiano Vecelio? ULAN is a structured vocabulary, including names, biographies, related people, and other...
Introduction to Controlled Vocabularies

- For information about controlled vocabularies
- Author: Patricia Harpring
- Series Editor: Murtha Baca
The Way We Were

Where We Are Now

• Introduction
The Way We Were

Researching art, architecture, cultural heritage

- How did art historians do research in the past?
- By hand, physical resources and card catalogs, bibliographic indexes such as BHA (Bibliography for the History of Art)
- Printing out, photocopying, taking photos, note taking
- Traveling around the world, many months to find all data

- Needed better methods and tools for research and discovery
- Solutions would also address needs of repositories, other cataloging institutions with mission to disseminate their data
- The Getty vocabularies, CDWA, etc. were developed to allow consistency in cataloging and improvement of retrieval
• Goal = data linked to other data, discoverable – First = human factor, links/consensus across different disciplines; repositories (archives, special collections, visual resources, museums, bibliographic, scholars); languages and cultures; current and historical
• Now we can begin to find materials for research and discovery online
• Getty vocabularies have been used for indexing. Now = links are possible via LOD, links to TGN and AAT within ULAN are used
• 90 sample SPARQL queries, editable

Find artists who worked in Italy and lived during a given time range but who are not Italian

Select ULAN records
• Having event that took place in tgn:1000080 Italy or any of its descendants
• Birth date between 1250 and 1780
• Descendants of facet ulan:500000002 "Persons, Artists"
• Not having nationality aat:300111198 Italian or any of its descendants

• Then use this set of artists to search for works

A few decades have passed ...

Using Linked Open Data

Getty Vocabularies are LINK-able

ULAN

Data in standard formats that allow linking

select ?x ?name ?bio ?birth {
  ?x gvp:prefLabelGVP/xl:literalForm ?name;
  filter ("1250"^^xsd:gYear <= ?birth & & ?birth <= "1780"^^xsd:gYear)
  filter exists {?x gvp:broaderExtended ?facet. filter (?facet in (ulan:50000003, ulan:50000002))}
  filter not exists {
    ?x foaf:focus/(schema:nationality|(schema:nationality/gvp:broaderExtended)) aat:300111198}
}
What is Linked Open Data (LOD)?

The AAT, TGN, and ULAN are now available as LOD
They are published under the Open Data Commons Attribution License (ODC-By) 1.0

- When data is linked and open, it means that data is structured and published according to the principles of Linked Data = both interlinked and made openly accessible and shareable on Semantic Web

- Goal = allow data from different resources to be interconnected and queried
What is Linked Open Data (LOD)?

- Universal Resource Identifier (URI) - an ASCII string used to identify things on the Semantic Web
  http://vocab.getty.edu/aat/300198841

- URIs are linked to each other through triples composed of subject-predicate-object relationships
  <aat:300198841> <gvp:aat2100_distinguished_from> <aat:300197140>

  subject  predicate  object
  rhyta  [are]  distinguished from  stirrup cups

- The definitions of data elements and links are described by ontologies
  http://www.w3.org/2004/02/skos/core#
  http://www.w3.org/ns/prov#
  http://purl.org/dc/elements/1.1/

- Data is delivered to a requesting agent through a standard triple serialization using HTTP
  RDF/XML, Notation-3 (N3), Turtle, N-Triples, RDFa, JSON, JSON-LD
• Context of the Getty Vocabularies
The Getty vocabularies comply with standards for thesaurus construction (NISO and ISO)

Grow through contributions from the user community

Compiled and disseminated by the Getty Vocabulary Program (GRI) and Getty Digital

Released in online search (refreshed every month), XML, Relational Tables, Web Services, JSON, RDF, N3/Turtle, N-Triples; analysis going on now for other formats

Batch loading of data
From various contributors, In our prescribed format

Processing Data
Global edits, VCS system, Merging, editing/adding info
Moving/adding links

Releasing Data
Release formats
Web, LOD, XML, Rel Tables
Context of the Getty vocabularies

Getty processes contributions

- **300 contributing institutions** to the Getty vocabularies
  
  [www.getty.edu/research/tools/vocabularies/contributors.html](http://www.getty.edu/research/tools/vocabularies/contributors.html)

### Batch loading of data
- From various contributors,
- In our prescribed format

### Processing Data
- Global edits, VCS system,
- Merging, editing/adding info
- Moving/adding links

### Releasing Data
- Release formats
- Web, LOD, XML, Rel Tables
Context of the Getty vocabularies

- Valued as authorities =
  1. quality is reliable (compiled by experts and sources are cited)
  2. the data is linkable
- Use of Getty vocabularies = very high for the domain
- Online search page = around 100,000 searches / month, top resources at Getty Research Institute (GRI)
- Linked Open Data (LOD), typical month in 2018 = over 1,000,000 records (92.95 GB of data)
- Implemented in collection management systems and Web sites around the world, new implementations
### Catalog Level
- **item**

### Classification
- **sculpture**  |  **antiquities**

### Work Type
- **statuette**  |  **AAT**

### Titles
- **Female Figure of the Kilia Type**
- **Female Figure (Star Gazer)**

### Creator
- **unknown Anatolian**  |  **ULAN**

### Creation Date
- **2800/2200 BCE**

### Style/period:
- **Chalcolithic**

### General Subject
- **human figures**

### Specific Subject
- **fertility**  |  **human female**

### Current Location
- **J. Paul Getty Museum, Getty Villa Malibu (Los Angeles, California, USA)**

### Repository Number
- **88.AA.122**

### Dimensions
- **14.3 cm height (5 5/8 inches)**

### Mat & Tech
- **carved marble**  |  **Index:**  **marble**

### Style
- **Kilia type**

---

**How are the Getty vocabs used?**

- Used for cataloging and for retrieval
- Fields controlled by Getty vocabularies
Sample record

**AAT_ID:** 300011329

**Terms:**
- bas-reliefs (pref, en, fr)
- bas-relief (en, fr)
- low reliefs (en)
- bassorilievo (it)
- bajos relieves (es)
- Flachreliefs (de)
- 浅浮雕 (zh; Chinese traditional)
- qiān fú diāo (Chinese (transliterated Hanyu Pinyin))
- qian fu diao (Chinese (transliterated Pinyin without tones))
- ch‘ien fu tiao (Chinese (transliterated Wade-Giles))

**Hierarchical Relationships**
- Objects Facet
  - Visual and Verbal Communication
    - Visual Works
      - <visual works by material or technique>
        - sculpture (visual works)
      - <sculpture by technique>
        - reliefs (sculptures)
        - bas-reliefs (sculpture)

**Associative Relationships**
- produced by ...
  - bas-relief (technique) [300053623]
- distinguished from ...
  - high reliefs (sculpture) [300184782]

**Scope Notes:**
- Refers to works executed in relatively shallow relief. (en)
- Beeldhouwwerken uitgevoerd in relatief laag reliëf. (nl)
- Úsesa para obras ejecutadas en relieve relativamente superficial. (es)
- 指浮雕图案较浅的作品. (zh)
- Bezeichnet eine Arbeit, die in relativ flachem Relief ausgeführt ist. (de)

**Contributors:** AS-Academia Sinica, CDBP-DIBAM, GCI, ICCD, IfM-SMB-PK, RKD, AAT-Ned, VP


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Scope of each Getty vocabulary

**TGN**

*Getty Thesaurus of Geographic Names®*

Focuses on places relevant to **art**, **architecture**, and related disciplines, recording names, relationships, place types, dates, notes, and coordinates for **current and historical cities, nations, empires, archaeological sites, lost settlements, and physical features**

Is a thesaurus, but through LOD TGN may be linked to GIS and maps

---

**Sample record**

**TGN_ID:** 300011329

**Names:**
Siena (pref, en,it,de,nl,fr,es)
Sienna (en, it)
Sienne (fr)
Σιένα (el)
锡耶那 (zh)
Сиена (ru)
סיניה (he)
シエーナ (ja)
Sienese (en,adj)
Siene (historical, la)
Saena Julia (historical, la)
Sena (historical, Etruscan)

---

**Hierarchical Rel.** *(polyhierarchical)*

- **World (facet)**
  - Europe (continent)
    - Italy (nation)
      - Tuscany (region)
        - Siena (province)

**Focus**

Current and historical cities, nations, empires, archaeological sites, lost settlements, and physical features

**Place Types** *(historical, la)*

- inhabited place founded by Etruscans
- city
- etruscan capital
- commune (administrative) since 1125
- cultural center
- university center
- world heritage site

- **Lat:** 43° 19' 07" N (43.3180)
- **Long:** 011° 19' 50" E (11.3283)
- **Elevation:** 1056.430 feet (322.0000 meters)

**Note:** Siena was founded as an Etruscan hill town; later was the Roman city of Sena Julia (3rd century BCE). It flourished under the Lombard kings (6th century CE) and was Medieval self-governing commune...

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**Contributors:** BHA, FDA, GRLPSC, VP
Sample record

**ULAN_ID:** 500014514

**Names:**
Gaudí, Antoni (ca,es,en,fr,it)
Antoni Gaudí
Cornet, Antoni Gaudí
Gaudí, Antonio Gaudí y Gaudí, Antoní
Gaudí i Cornet, Antonio Gaudí Jornet, Antoni Gaudí y Cornet, Antoni Gaodi, Antoni Gaudí, Antonio

**Nationalities:**
Spanish (pref)
Catalan

**Roles:**
artist (pref)
architect
landscape architect
furniture designer

**Gender:** male

**Birth and Death Places:**
Born: Reus (Tarragona province, Catalonia, Spain) (inhab place)
Died: Barcelona (Barcelona province, Catalonia, Spain) (inhab place)

**Associative Relationships:**
collaborated with .... Torres-García, Joaquín (Uruguayan painter and theorist, 1874-1949) 1903-1904 [500031259]
worked with … Martorell y Montells, Joan (Spanish architect, 1833-1906) [500072753]
student of .... Sala Cortes, Emilio (Spanish architect, active late 19th century) [500287019]

**Contributors:**
VP, JPGM, Avery, FRICK, WCI, Prov, GRLPSC, BHA, CCA

**Sources:**
Scope of each Getty vocabulary

*Getty Iconography Authority*

New resource that focuses on subjects and topics relevant to art, architecture, and related disciplines

Includes multilingual and multicultural proper names, relationships, and dates for iconographical narratives, religious or fictional characters, themes, historical events, and named literary works and performing arts

**Sample record**

*IA_ID:* 1000085

**Names:**
Avalokiteshvara (en)
Avalokiteśvara (en)
Avalokitesvara (en)
अवलोकितेश्वर (sa)
Spyan ras gzigs (Tibetan transliterated)

**AAT links**
- role/characteristic is ... bodhisattva
- symbolic attribute is ... lotus
- culture/religion is ... Mahayana (Buddhism)
- culture/religion is ... Theravada (Buddhism)

**Hierarchical Relationships**

Legend, Religion, Mythology
- Buddhist iconography
- Buddhist characters
- Avalokiteshvara (Buddhist iconography)

**Associative Relationships**

associated with .... Krishna (Hindu ideity)
counterpart is .... Guanyin (Buddhist bodhisattva)
counterpart is .... Tara (Hindu-Buddhist deity)
has as manifestation .... Amoghapasa (Buddhist character)
author of .... Great Compassion Mantra (incantation, Buddhist, translated 7th/8th century)

**Note**
The bodhisattva of infinite compassion and mercy; embodies the compassion of all Buddhas. This bodhisattva is portrayed in different cultures as either female or male...

**Contributors & sources**
[VP, Rijksmuseum] Encyclopedia Britannica Online (2002-); Bowker, Oxford Dictionary of World Religions (1997); Huntington, Art of Ancient India (1985); **LC:** LC control no.: sh 85010492

**LINKS to other resources:** LOC, Iconclass
Sample record

CONA ID: 700000141

Titles/Names:
Hagia Sophia (en)
Ayasofya (tr)
Αγία Σοφία (el)
Agia Sophia
Hagia Sophia
Sainte-Sophie (fr)
Santa Sofia (es)
Sancta Sophia (la)
Sancta Sapientia (la)
Holy Wisdom (en)
Saint Sophia (en)
圣索菲亚大教堂 (zh)

Catalog Level: item

Work Types:
church (historical)
mosque (historical)
museum
basilica

Classification:
architecture

Creation Date:
original structure dated from 4th century CE; present structure built 532-537 CE; rebuilt in 12th century

Creator Display:
Anthemios of Tralles (Byzantine, ca. 474-ca. 534) and Isidoros of Meletus, the Elder (Byzantine, active mid-6th century)

Locations:
Current: Istanbul (Turkey)
Address Note: 41.008548°N; 28.979938°E

Mat & Tech: system bearing masonry, centralized plan; ashlar and brick; interior surfaces are sheathed with polychrome marble, porphyry, and mosaics

Dimensions: central dome: diameter 31 meters (102 feet); height 56 meters (184 feet)

Styles:
Byzantine | Ottoman

General Subject:
architecture Type: isness
religion and mythology Extent: purpose

Specific Subjects:
Holy Wisdom (Christian allegory)

Contributors:
VP; BWR


Images may be under additional copyright
• Linking or Merging?
Merging data in one record

- Compiled resources = multiple contributors, separate records for same entity
- Published as unified records for end users
- Rather than clustering, Getty vocabularies merge the data into a homogenous whole
- The attribution to the contributor and sources are retained

ULAN_500017409

Names:
Guardi, Francesco
Guardi, Francesco
Garde, Francesco
Gardis, Francesco
François Guardi

Nationalities:
Italian
Venetian

Roles:
artist
painter
landscapist

Links to images
http://www.getty.edu/art/collection/objects/226156
detail of portrait, by Pietro Longhi, in Ca'Rezzonico, Venice

Getty vocabularies merge contributed records

ULAN_500017409

Names:
Guardi, Francesco
Guardi, Francesco
Garde, Francesco
Gardis, Francesco
François Guardi

Nationalities:
Italian
Venetian

Roles:
artist
painter
landscapist

Relationships and linking are built into and among the Getty vocabularies

LINK back to contributed data
Relationships and linking are built into and among the Getty vocabularies

Merging data in one record

<table>
<thead>
<tr>
<th>ULAN ID</th>
<th>Matching name</th>
<th>Display biography</th>
<th>Roles (AAT-controlled)</th>
<th>Nationality (AAT-controlled)</th>
<th>Estimated birth date</th>
<th>Estimated death date</th>
</tr>
</thead>
<tbody>
<tr>
<td>500017409</td>
<td>Guardi, Francesco</td>
<td>Venetian painter, 1712-1793</td>
<td>artist, painter, landscapist</td>
<td>Venetian Italian</td>
<td>1712</td>
<td>1793</td>
</tr>
<tr>
<td>500312969</td>
<td>Guardi, Francesco</td>
<td>Italian noble, born 1514</td>
<td>noble</td>
<td>Italian</td>
<td>1514</td>
<td>1614</td>
</tr>
<tr>
<td>500412666</td>
<td>Guardi, Francesco</td>
<td>Italian artist, ca. 1712-1793</td>
<td>artist</td>
<td>Italian</td>
<td>1707</td>
<td>1793</td>
</tr>
</tbody>
</table>

A name matches exactly; role matches; a nationality matches; dates within range?

- Candidates for merging
- Automatically merged or rejected for merging
- Possible but not enough firm data = passed to human editors
- Long experience in perfecting algorithms → Reconciliation tools are under development by Getty Digital
**ULAN record is a merged, homogenous entity**

Union List of Artist Names® Online Full Record Display

Click the icon to view the hierarchy.

Semantic View (JSON, JSONLD, RDF, Turtle, N-Triples)  • Representations

**Guardi, Francesco** (Italian painter, 1712-1793)

**Note:** Venetian painter, during the first half of his life known for his works on decorations and church paintings; later became vedutista (view painter) of Venetian urban life.

**Names:**
- Guardi, Francesco (preferred, V, index, LC)
- Francesco Guardi (V, display)
- Gardi, Francesco (V)
- Garde, Francesco (V)
- Gardis, Francesco (V)
- Gauda, Francesco (V)
- Guada, Francesco (V)
- Guarde, Francesco (V)
- Guardet, Francesco (V)
- Gvardi, Franceskeso (V)
- Guardi, François (V)
- Guardi, Francisco (V)

**Contributors**
- AVERY, BHA, GRISC, GRL, GRLPA, PROV, VP, WCI, WCP, WL-Courtauld

**Sources**
- Avery Authority files (1963-)
- Harald Szeemann papers, Finding Aid, GRI Special Collections (2011-)
- J. Paul Getty Museum, collections online (2000-)
- Library of Congress Authorities database (n.d.) n 50074509
- M. Knoedler & Co. records, Finding Aid, GRI Special Collections (2012-)
- Provenance Index Databases, Authority file (1985-)
- RILA/BHA (1975-2000)
- Witt Library, Authority files

Attribution to contributor and source is maintained, but merged, unified, and “preferred” is flagged
Guardi, Francesco (Italian painter, 1712-1793)

**Contributors**
AVERY, BHA, GRI, WL-Courtauld, Sources

**Roles**
artist (preferred)
painter
landscapist

**Nationalities:**
Italian (preferred)
Venetian

**Gender:**
male

**Birth and Death Places:**
Born: Venice (Venezia province, Veneto, Italy) (inhabited place)
Died: Venice (Venezia province, Veneto, Italy) (inhabited place)

**Related People or Corporate Bodies:**
member of .... Guardi family
(parent of .... Guardi, Giacomo)
(sibling by marriage (in-law) of .... Tiepolo, Giovanni Battista)
(sibling of .... Guardi, Antonio)
(sibling of .... Guardi, Niccolò)

Attribution to contributor and source is maintained, but merged, unified, and "preferred" is flagged
ULAN record is a merged, homogenous entity

Guardi, Francesco (Italian painter, 1712-1793) ...... [VP Preferred]

Italian (preferred)
Venetian

List/Hierarchical Position:

Persons, Artists
........ Guardi, Francesco (I)

Contributors

AVERY, BHA, GRISC, GRL, GRLPA, PROV, VP, WCI, WCP, WL-Courtauld

Nationalities:

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Example of a “clustered” display with separate entities

VIAF ID: 27073465 (Personal)

In VIAF: Virtual International Authority File

(ULAN is a contributor to VIAF)
Equivalence Relationships
Hierarchical Relationships
Associative Relationships

• Links within a Vocabulary: Thesaural Relationships
Relationships and linking are built into Getty vocabularies

**“SUBJECT”**

- **MAIN TABLE**
  - basic record information,
  - unique ID, parent_key, record type,
  - descriptive/scope note, flags

**NAMES / TERMS**

- multiple names, one is flagged preferred; dates for names

**Language**

**Contributors**

**Sources**

**Coordinates**

**Biography**

- display bio, birth/death dates, places

**Events**

- event, dates

**Nationality**

**PLACE TYPES/ROLES**

- multiple place types or roles, one is flagged preferred, dates

**ASSOCIATIVE RELATIONSHIPS**

- links between subjects, dates

---

- **Simplified Entity Relationship Diagram**

- **Source controlled**
- **Relationship Types controlled**
- **Language controlled**
- **Contributor controlled**
- **Nationality controlled**
- **Events controlled**
- **Location controlled**
- **Place Type / Role controlled**

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The Getty Vocabularies Are Thesauri

- Thesaurus: A semantic network of unique concepts
- Thesauri may be monolingual or multilingual
- Thesauri may have the following three relationships:
  - Equivalence Relationships
  - Hierarchical Relationships
  - Associative Relationships
Equivalence Relationship
Terms are synonyms

- Links between terms in one record
- True synonymy, so meanings are identical or as nearly identical as possible (re. parts of speech, etc.)
- Precision in indexing and retrieval
- Links facilitated by unique IDs

AAT_ID: 300132869
Terms:
- triumphal arches [1000007003] Qual: (memorial arches)
  Pref: pref Type: D Lang: (en) Con.: FDA, GCI, VP
- triumphal arch [1000290974] Qual: (memorial arch)
  Type: ALT Lang: (en) Con.: FDA, VP
- 凱旋門 Qual: (紀念性拱門) [1000545314]
  Type: D Lang: (zh, Chinese (traditional)) Con.: AS
- 凱旋門 [1000545315] Lang: (zh, Chinese (transliterated Pinyin without tones)) Con.: AS
- triomfbogen [1000467730] Type: D Lang: (nl) Con.: RKD, AAT-Ned
- triomfboog [1000467731] Lang: (nl) Con.: RKD, AAT-Ned
- Triumphbögen [1000603579] Qual: (Ehrenbögen)
  Type: D Lang: (de) Con.: IfM-SMB-PK
- Triumphbogen [1000603580] Qual: (Ehrenbögen)
  Lang: (de) Con.: IfM-SMB-PK
- archi trionfali [1000131380] Type: D Lang: (it) Con.: ICCD
- arcos de triunfo [1000415271] Type: D Lang: (es) Con.: CDBP-SNPC
- arco de triunfo [1000415272] Lang: (es) Con.: CDBP-SNPC
- arcs de triompe [1000777382] Type: D Lang: (fr) Con.: AAT-AD
- arc de triompe [1000777381] Lang: (fr) Con.: AAT-AD

Links between terms

Relationships and linking are built into Getty vocabularies
### Equivalence Relationship

Terms carry additional data

- Information associated with the terms allow for linking and classification

<table>
<thead>
<tr>
<th>AAT_ID and Term IDs (linkable)</th>
<th>Terms carry additional data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AAT_ID</strong>: 300132869</td>
<td></td>
</tr>
<tr>
<td><strong>Terms</strong>:</td>
<td></td>
</tr>
<tr>
<td>• <strong>triumphal arches</strong> [1000007003]</td>
<td><strong>Qual</strong>: (memorial arches)</td>
</tr>
<tr>
<td>Pref: pref Type: D Lang: (en) Con.: FDA, GCI, VP</td>
<td></td>
</tr>
<tr>
<td>• <strong>triumphal arch</strong> [1000290974]</td>
<td><strong>Qual</strong>: (memorial arch)</td>
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<td></td>
</tr>
<tr>
<td>• 凱旋門 <strong>Qual</strong>: (紀念性拱門) [1000545314]</td>
<td></td>
</tr>
<tr>
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<td></td>
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<tr>
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<td><strong>Qual</strong>: (memorial arches)</td>
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<tr>
<td>Pref: pref Type: D Lang: (en) Con.: FDA, GCI, VP</td>
<td></td>
</tr>
<tr>
<td>• triumphal arch [1000290974]</td>
<td><strong>Qual</strong>: (memorial arch)</td>
</tr>
<tr>
<td>Type: ALT Lang: (en) Con.: FDA, VP</td>
<td></td>
</tr>
<tr>
<td>• 凱旋門 <strong>Qual</strong>: (紀念性拱門) [1000545314]</td>
<td></td>
</tr>
<tr>
<td>Type: D Lang: (zh, Chinese (traditional)) Con.: AS</td>
<td></td>
</tr>
<tr>
<td>• 凱旋門 <strong>Qual</strong>: (紀念性拱門) [1000545314]</td>
<td></td>
</tr>
<tr>
<td>Type: D Lang: (zh, Chinese (transliterated Pinyin)) Con.: AS</td>
<td></td>
</tr>
<tr>
<td>• 凱旋門 <strong>Qual</strong>: (紀念性拱門) [1000545314]</td>
<td></td>
</tr>
<tr>
<td>Type: D Lang: (zh, Chinese (transliterated Pinyin without tones)) Con.: AS</td>
<td></td>
</tr>
<tr>
<td>• arco de triunfo [1000415272]</td>
<td>Lang: (es) Con.: CDBP-DIBAM</td>
</tr>
<tr>
<td>• arcs de triomphe [1000777382] Type: D Lang: (fr) Con.: AAT-AD</td>
<td></td>
</tr>
<tr>
<td>• arc de triomphe [1000777381]</td>
<td>Lang: (fr) Con.: AAT-AD</td>
</tr>
</tbody>
</table>
Equivalence Relationship

Terms carry additional data

- Linkable to outside resources
- Reference to the resource is provided

**AAT_ID:** 300132869

**Terms:**
- triumphal arches [1000007003] **Qual:** (memorial arches)
  - **Pref:** pref **Type:** D **Lang:** (en) **Con.:** FDA, GCI, VP
- triumphal arch [1000290974] **Qual:** (memorial arch)
  - **Type:** ALT **Lang:** (en) **Con.:** FDA, VP
- 凱旋門 **Qual:** (紀念性拱門) [1000545314]
  - **Type:** D **Lang:** (zh, Chinese (traditional)) **Con.:** AS
- 凯旋门 **Lang:** (zh, Chinese (transliterated HanyuPinyin)) **Con.:** AS
- kǎixuánmén **Lang:** (zh, Chinese (transliterated Pinyin without tones)) **Con.:** AS
- triomfbogen **Lang:** (nl) **Con.:** RKD, AAT-Ned
- triomfboog **Lang:** (nl) **Con.:** RKD, AAT-Ned
- Triumphbögen **Qual:** (Ehrenbögen) **Type:** D **Lang:** (de) **Con.:** IfM-SMB-PK
- Triumphbogen **Qual:** (Ehrenbögen) **Lang:** (de) **Con.:** IfM-SMB-PK
- archi trionfali **Type:** D **Lang:** (it) **Con.:** ICCD
- arcos de triunfo [1000415271] **Lang:** (es) **Con.:** CDBP-DIBAM
- arcs de triomphe [1000777382] **Type:** D **Lang:** (fr) **Con.:** AAT-AD
- arc de triomphe [1000777381] **Lang:** (fr) **Con.:** AAT-AD

**Sources:**
- AATA database (2002) **129984** checked 26 January 2012
- Brilliant, Roman Art (1974) index
- Candidate term Candidate term - ADAG - 10/1985
- Library of Congress Authorities online (2002) **sh 85006535**
Authoritativeness of the Getty vocabularies is warranted by their accuracy and basis in scholarship.

Flag **Rembrandt van Rijn** = Preferred = most commonly used names in published, scholarly or expert resources.
Also include common names, historical names, nicknames, common published misspellings, signatures, etc. = variant names.

Usually avoid unique misspellings or unique archival variants.

However, for Provenance Index LOD, experimented with the *Local Use* flag, names may be ignored by other implementers.
Names found in a unique inventory or sales catalog.
But not a scalable solution; better to retain a local authority and contribute to ULAN the names useful to a broader community.

Equivalence Relationship

**LINKS – when to ignore them**
Hierarchical Relationship

What are types of hierarchical relationships?

- Hierarchical relationships = broader and narrower (parent/child) relationships between two entities in a thesaurus; 3 types of relationships
  - genus/species = AAT triumphal arches is a type of memorial arches
  - whole/part = TGN Machupicchu is part of Cuzco (region), which is part of Peru
  - instance = Getty IA Penance of Indra is an instance of <Hindu narratives>

Hierarchical Relationships

Objects Facet

.. Built Environment (hierarchy name) (G)
.... Single Built Works (hierarchy name) (G)
...... single built works (built environment) (G)
......... <single built works by specific type> (G)
........ ....... <single built works by function> (G)
............... monuments (G)
.............. <monuments by form> (G)
................ memorial arches (G)
..................... triumphal arches (memorial arches) (G)
Hierarchical Relationship

Using the polyhierarchy for linking

• Links = preferred parents also non-preferred parents
• E.g., linking triumphal arches to p’ai-lous as siblings under ceremonial gates, as well as under monuments

In Hanzhong, Shaanxi Province, China

In Munich, Germany
Hierarchical Relationship

**LOD** = How to expedite publication of less than optimal data in hierarchy?

- Linking: How to allow publication of data not fully resolved?
- Due to incomplete information for cataloger or state of scholarship
- E.g., hierarchical levels where specific applicable level is not known placed under broader context, *lost & found*
- E.g., *Abaskūn*, a trading port city on the Caspian Sea, 9th-century literary sources = located within area of modern-day Iran – scholars don’t know which province

**LINKS** – hierarchy for uncertain data

- .... *World* (facet)
- .......... *Asia* (continent)
- ............ *Iran* (nation)
- ................... *<lost & found/Iran>* (miscellaneous)
- .................... *Abaskūn* (lost settlement)
Hierarchical Relationship

How to expedite publication of less than optimal data in hierarchy?

- *Unidentified named* ... levels used in ULAN and CONA for entities not yet identified
- E.g., ULAN, people and firms contributed by Provenance Index, Witt, Getty Special Collections finding aids, etc.
- Some may be resolved via research or expert crowd sourcing in future

**Top of the ULAN list / hierarchy**

- [Unidentified Named People and Firms](https://ulans.org/) (ULAN facet)
- [Aalen, V.](https://ulans.org/ULAN/1/30521) (unknown artist)
- [Aalst, C.J.K. van, Dr.](https://ulans.org/ULAN/1/30947) (Dutch owner, fl. 1917-1953)
- [Aalst, N.J. van](https://ulans.org/ULAN/1/30946) (Dutch owner, fl. 1950s-1960s)
- [Aalst, van](https://ulans.org/ULAN/1/30949) (Unknown artist, Sale at Dordrecht, 1 November 1802)
- [Aaron](https://ulans.org/ULAN/1/30950) (British owner)
- [Aaron et Cie.](https://ulans.org/ULAN/1/30951) (French owner, fl. 1960s -1980s)
- [Aav](https://ulans.org/ULAN/1/30522) (artist, active 20th century)
- [Aa, van der](https://ulans.org/ULAN/1/30523) (Owner)
- [A. Bacon](https://ulans.org/ULAN/1/30524) (Unknown artist)
- [Abady, Sheila](https://ulans.org/ULAN/1/30525) (artist)
**Associative Relationship**

Links between records in one vocabulary

- Relationships between records closely related conceptually, but not hierarchical
- Relationship type is defined

<table>
<thead>
<tr>
<th>activity/event</th>
<th>attributes/associated</th>
<th>field/discipline</th>
<th>genus/species</th>
<th>language</th>
<th>locus-setting</th>
<th>material</th>
<th>role</th>
<th>style/culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>[process/junction,</td>
<td>[in Activities-</td>
<td>[in Activities-</td>
<td>[others, Living Organisms]</td>
<td>[in Assoc Con]</td>
<td>[built work, settlement, feature, Built Environment]</td>
<td>[Materials]</td>
<td>[people, organizations in Agents; excluding living organisms]</td>
<td>[religion, ideology, AC]</td>
</tr>
<tr>
<td>2427 things – <strong>produced by</strong> – activity/event</td>
<td>2428 activity/event – <strong>produces</strong> – things</td>
<td>2836-2837 things - [are] derived/made from - genus/species [or its parts] κακου are derived/made from Phormium tenax (species); ostrich-egg cups are derived/made from Struthio camelus (species)</td>
<td>2852-2853 genus/species - 2881-2882 language - [is] reflected in – things Greek (Language) is reflected in Greek alphabet; Sanskrit is reflected in Vedas</td>
<td>2208-2209 locus/setting – locus setting for – things on-demand printing causes/is required for on-demand publishing; preserving causes/is required for preservation</td>
<td>2501-2502 things – made of/require – material obsidian mirrors are made of/require obsidian; worris (sculptures) are made of/require ivory</td>
<td>2321-2322 things – <strong>used by</strong> – role violincellos are used by violincellists; surveying instruments are used by surveyors</td>
<td>2551-things are produced (process) [culture] reflects by Judaeas</td>
<td></td>
</tr>
</tbody>
</table>
Associative Relationship

Links between records in one vocabulary

**LINKS** – identifying type of link

**AAT**

<table>
<thead>
<tr>
<th>activity/event</th>
<th>attributes/associated</th>
<th>field/discipline</th>
<th>genus/species</th>
</tr>
</thead>
<tbody>
<tr>
<td>process/junction,</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2427 things – *produced by* – activity/event

2428 activity/event – *produces* – things

AAT 300007868 suspension bridges

2427 **[are] produced by**

AAT 300418008 suspension construction (technique)

- In preparation for LOD releases, relationships that had been maintained by hand had to be corrected if logic was off or relationship types incorrect
Associative Relationship

Links between records in one vocabulary:
Dates of relationship

- E.g., ULAN, reciprocal relationships teacher/student
  1101 person – teacher of – person
  1102 person – student of – person

Japanese printmaker Katsushika Hokusai [was] teacher of Katsushika Taito II

- As with other relationships in vocabulary records, the relationship may be circumscribed with dates
The Getty vocabularies are linked to each other

- Links between Vocabularies
• Certain data within each Getty vocabulary = controlled through links to other vocabularies.

• Even before linking between vocabularies was technically practical, fields controlled by extensible lists from other vocabularies.
Links between vocabularies

- E.g., **roles** in ULAN (e.g., artist, watercolorist, portraitist, patron, emperor) = controlled by Agents Facet in AAT

- Going from hand-made lists to LOD required cleaning up inconsistencies
Links between vocabularies

Links – controlled lists ➔ links

AAT record

ID: 300108469
Page Link: http://vocab.getty.edu/page/aat

Chinatowns (neighborhoods, residential)

Note: Chinese sections of large towns or cities

Terms:
Chinatowns (preferred, C,U,English-P,D,U)
Chinatown (C,U,English,AD,U,SN)
中國城 (C,U,Chinese (traditional)-P,D,U,U)
唐人街 (C,U,Chinese (traditional),UF,U,U)
華埠 (C,U,Chinese (traditional),UF,U,U)
zhòng guó chéng (C,U,Chinese (traditional),UF,U,U)
zhong guo cheng (C,U,Chinese (traditional),UF,U,U)
chung kuo ch'eng (C,U,Chinese (traditional),UF,U,U)
chinezenwijken (C,U,Dutch-P,D,U,U)
chinezenwijk (C,U,Dutch,AD,U,U)
barrios chinos (residentes de ascendencia)
barrio chino (residentes de ascendencia)
Relationships and linking are built into Getty vocabularies

Links between vocabularies

<table>
<thead>
<tr>
<th>ULAN Nat. term</th>
<th>AAT_ID match</th>
<th>AAT Term_ID</th>
<th>AAT term</th>
</tr>
</thead>
<tbody>
<tr>
<td>901840 Bavarian</td>
<td>300385972</td>
<td>1000568017</td>
<td>Bavarian</td>
</tr>
<tr>
<td>901850 Hamburger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>901860 Hessian</td>
<td>500014076 (false match)</td>
<td>1000014077</td>
<td>hessian (canvas (textile material))</td>
</tr>
<tr>
<td>901870 Thuringian</td>
<td>300105675</td>
<td>1000105675</td>
<td>Thuringian</td>
</tr>
<tr>
<td>901880 Saxon</td>
<td>300379686</td>
<td>1000540441</td>
<td>Saxon</td>
</tr>
<tr>
<td>901890 Wendish</td>
<td>300263656</td>
<td>1000263656</td>
<td>Wendish</td>
</tr>
<tr>
<td>901900 Rhenish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>901910 Frankish</td>
<td>300019478</td>
<td>1000019478</td>
<td>Frankish</td>
</tr>
<tr>
<td>901920 Merovingian</td>
<td>300019512</td>
<td>1000019512</td>
<td>Merovingian (Germanic style)</td>
</tr>
<tr>
<td>901930 Carinthian</td>
<td>300385997</td>
<td>1000568044</td>
<td>Carinthian</td>
</tr>
<tr>
<td>901960 Pannonian</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Many links cannot be made automatically.
Current and Future Goal:

- Relationships from the Getty vocabularies to other resources within the Getty and outside
- E.g., Provenance Index data
• Getty vocabularies accessible in other resources
  • E.g., AAT in Chile, Netherlands, Taiwan, Germany
  • TGN, ULAN, AAT in collections management systems, etc.

**Links to outside**

<table>
<thead>
<tr>
<th>Type de término:</th>
<th>Todos</th>
<th>Preferentes</th>
<th>Alternativos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Búsqueda avanzada:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FACETA CONCEPTOS ASOCIADOS**
- conceptos asociados

**FACETA ATRIBUTOS FÍSICOS**
- atributos y propiedades

**FACETA ESTILOS Y PERIÓDOS**
- estilos y períodos

---

**trenzado doble**

**warp twining**

**NOTA DE APLICACIÓN**
Técnica de tejido de textiles en la cual dos o más extremos de la urdimbre se enrollan entre sí al mismo tiempo que se entrelazan con la trama.

**TÉRMINOS ALTERNATIVOS**

**tapiz**

Lucie-Smith, Edward, 1997, "Diccionario de Términos de Arte"
Links to outside

- Various institutions have linked to Getty vocabularies
  - E.g., Te Papa, MoMA
  - https://github.com/MuseumofModernArt/collection
  - Gilcrease Museum
    - https://collections.gilcrease.org/object/1526167

Category details

- Category: twining
- Alternative terms: twined
- Source: Art & Architecture Thesaurus

Overview

Textile process involving twisting two or more active strands together as they interlace with another set of strands laid in parallel.

Production: Unknown; weaver; New Zealand
Materials: cloaks, costume
Techniques: twining
The SPARQL API is different from the other Europeana APIs in that it allows you to explore connections between Europeana data and outside data sources, like VIAF, Iconclass, Getty Vocabularies (AAT) ...
About CONA
What is CONA

Names/titles and other information about many types of works, built and unbuilt, historical and current, extant and destroyed, groups and items

LINKS and RELATIONSHIPS
- Thesaural relationships, equivalence, associative, hierarchical
- Powerful links and relationships within a CONA, between CONA records, and to the other Getty vocabularies

Sample record

CONA ID: 700000141

Titles/Names:
Hagia Sophia (en)
Ayasofya (tr)
Αγία Σοφία (el)
Agia Sofia
Agia Sophia
Haghia Sophia
Sainte-Sophie (fr)
Santa Sofia (es)
Sancta Sophia (la)
Sancta Sapientia (la)
Holy Wisdom (en)
Saint Sophia (en)
圣索菲亚大教堂 (zh)

Catalog Level: item

Work Types:
church (historical)
mosque (historical)
museum
basilica

Classification: architecture

Creation Date:
original structure dated from 4th century CE; present structure built 532-537 CE; rebuilt in 12th century

Creator Display:
Anthemios of Tralles (Byzantine, ca. 474-ca. 534) and Isidoros of Meletus, the Elder (Byzantine, active mid-6th century)

Locations:
Current: Istanbul (Turkey)
Address Note: 41.008548°N; 28.979938°E

Mat & Tech: system bearing masonry, centralized plan; ashlar and brick; interior surfaces are sheathed with polychrome marble, porphyry, and mosaics

Dimensions: central dome: diameter 31 meters (102 feet); height 56 meters (184 feet)

Styles:
Byzantine | Ottoman

General Subject: architecture

Type: isness
religion and mythology
Extent: purpose

Specific Subjects:
Holy Wisdom (Christian allegory)

Contributors:
VP; BWR


Images may be under additional copyright.
How will CONA be used? Ideas for Getty use, and beyond

- Compiled in CONA 9,000 of records to represent many types of works and relationships in order to test hypotheses about content, required fields, editorial guidelines, data model
- Now analyzing how CONA can be most useful for GRI and beyond decisions being considered by Digital Initiatives section (headed by Anne Helmreich, Associate Director)
- Development driven by needs of GRI projects and community, several possibilities

Contributors:

- Built Works Registry, etc.

Sample record

**CONA ID:** 700000141

**Titles/Names:**

Hagia Sophia (en)
Ayasofya (tr)
Αγία Σοφία (el)
Agia Sofia
Agia Sophia
Haghia Sophia
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Sancta Sophia (la)
Sancta Sapientia (la)
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basilica

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architecture

**General Subject:**

architecture

**Type:** isness

religion and mythology

**Extent:** purpose

**Specific Subjects:**

Holy Wisdom (Christian allegory)

**Contributors:**

VP; BWR

**Sources:**

Broadened Scope of CONA: Major subdivisions

**Built Works**
- **Structures or parts of structures** that are the result of conscious construction, are of practical use, are relatively stable and permanent, and are of a size and scale appropriate for—but not limited to—habitable buildings

**Movable Works**
- The **visual arts and other cultural works** that are of the type collected by art museums and special collections, or by an ethnographic, anthropological, or other museum, or owned by a private collector; Examples include **paintings, sculpture, prints, drawings, manuscripts, photographs, ceramics, textiles, furniture, and other visual media such as frescoes and architectural sculpture, performance art, archaeological artifacts, and various functional objects that are from the realm of material culture and of the type collected by museums**

**Conceptual Works**
- **Multiples: records for series as a concept**, conceptual records for multiples (made from same plate, negative, mold, etc.), and other similar records; physical works, such as prints that belong to a series, may be linked to conceptual record for the series (similar to FRBR “work”)

**Visual Surrogates**
- **Images and three-dimensional works intended to be surrogates for the works depicted**, for example **study photographs**; does not include works considered themselves works of art (e.g., Julius Shulman)

**Unidentified Named Works**
- **Works described in archival inventories or other sources**, but their identity is not established (e.g., Provenance Index inventories, or named architecture in finding aids)
Possible implementations of CONA

Development would be driven by needs, if any, of PhotoTech project

(Records linked to CONA, not necessarily ingested)

CONA_ID: 700008694  Class.: paintings

Surrogate in GRI Photo Archive

Velázquez et al copy in the Uffizi after Rubens

Possible CONA project

• CONA as resource for works depicted in visual surrogates or in other works
• GRI Photo Archive = capture information about massive Photo Archive collection
Potential CONA project
• CONA as resource for works depicted in visual surrogates or in other works
• GRI Photo Archive = capture information about massive Photo Archive collection
• Investigate possibly Pharos application? (pharosartresearch.org, an international photo archive project)
• What is advantage to linking to CONA for work depicted?
• Access for all surrogates for same work
• Multilingual access, links, etc.

LINKS

specific subject

Surrogate in GRI Photo Archive

Velázquez et al copy in the Uffizi after Rubens

Enough information in surrogate records to make minimal record for work depicted
Possible implementations of CONA

Works depicted in visual surrogates

- Photograph in Photo Archive depicts a painting, which in turn is a copy after a lost painting
- Rubens' original painting was destroyed in the fire at the Royal Alcázar of Madrid in 1734

Surrogate in GRI Photo Archive

Velázquez et al copy in the Uffizi after Rubens

Lost painting by Rubens

Conceived as a visual surrogate and study photograph of Dutch paintings (1500–1600)

Equestrian Portrait of Philip IV, King of Spain (Spanish king, 1605–1665)

Fossi, Uffizi Gallery (2001)

Conceived as a visual surrogate of specific subject

CONA_ID: 700008694  Class: paintings

Dimensions: undocumented

Materials: oil on canvas

Creation Date: ca. 1645

Creator: Diego Velázquez and assistants; Peter Paul Rubens, now artist

Former: Sevilla (Seville, Andalusia, Spain)

Locations: province, Tuscany, Italy)

Subjects: portraits

Work Types: painting (visual work)

Materials: oil on canvas

Extent: work

General Subject: equestrian portrait

Specific Subjects: equestrian portrait

Creation: Madrid, Spain

Repository: Getty Research Institute

Photo Archive

General Subject: portrait

Specific Subject: Philip IV, King of Spain (Spanish king, 1605–1665)

Materials: oil on canvas

Extent: work

Dimensions: undetermined

Materials: photograph

Creation Date: unknown

Creator: now lost; Peter Paul Rubens, now lost; Fossi, Uffizi Gallery

Other: destruction: in the fire at the Royal Alcázar of Madrid in 1734

Sources and Contributors: [VP]

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Possible implementations of CONA

architectural documents at GRI

Movable works linked to architecture depicted

Development would be driven by needs, if any, of GRI

CONA ID 700000090  Class. architecture
Work Type: house
Title: Case Study House No. 21
Title: Bailey House Title: CSH #21
Creator: architect: Pierre Koenig
Creation Date: 1956-1958; renovated 1998
Dimensions: 1 story, 1320 square feet, 4 rooms and 2 baths, on a 110 x 160 foot lot
Mat & Tech: steel frame and flat roof deck
Current Location: Los Angeles (California, USA)  Address Note: 34.116634 - 118.391623; 038 Wonderland Park Avenue, Hollywood Hills, Los Angeles, 90046

CONA ID 700008539  Work Type: photograph
Title: Case Study House No. 21
Creator: Julius Shulman
Current Location: GRI Special Collections, Getty Center (Los Angeles, California); 2004.R.10 - 26622 - 32 - LF

CONA ID 700000120  Work Type: architectural drawing
Title: Case Study House No. 21
Creator: Pierre Koenig
Current Location: GRI Special Collections, Getty Center (Los Angeles, California) 2006.M.30 - based on

Preparatory for depicted in
Movable works linked to destroyed work

Destroyed, ephemeral triumphal arch

CONA ID 700001288  Class.: architecture

Work Type: triumphal arch (memorial arch)

Title: Arc de Triomphe du Trône

Location: Paris (France)

Creator: based on designs by Charles Perrault (French architect, 1613-1688), built by Claude Perrault (French architect, physician, scientist, 1613-1688)

Date: begun 1670, demolished 1716

Materials: stone and plaster

Dimensions: unavailable

General subject: architecture

Type: isness

Specific Subject: Louis XIV

Extent: honoree ephemeral structure    Extent: purpose
Possible implementations of CONA

JPGR could record deaccessioned works in CONA; No longer in their collections management system

Can also record works at a repository for exhibitions

Works in databases that are being retired, e.g., Art on Screen

---

• Works deaccessioned and deleted from repository database
  
  **Locations:**
  
  **Current:** Museo archeologico (Aidone, Sicily, Italy)
  Repository Numbers: unavailable
  
  **Former:** J. Paul Getty Museum (Los Angeles, California)
  Repository Numbers: former: 85.AD.105
  
  **Creation:** Morgantina (Sicily, Italy)

• Works in exhibitions, not owned by repository hosting the exhibition
  
  *E.g., loaned to JPGR from Kröller-Müller Stichting (Otterlo, Netherlands)*

• Film about art, in retired STAR Art on Screen DB
  
  *E.g., Palette of Glass, film about Chagall’s America Windows*

---

**CONA ID: 700006697 Work Type: sculpture**

Title: Greek god Hades

Current Location: Museo Archeologicodi Aidone

Location: formerly J. Paul Getty Museum

Discovery Location: Morgantina, Italy

Date: about 400-300 BCE

Materials: terracotta and polychromy

Dimensions: 10 3/4 x 8 1/16 x 7 5/16

---

**CONA ID: 700009210 Work Type: painting**

ID: 700009210 Record Type: Movable Work Images: 1

**Aanbidding der koningen (panel painting (painting by form); Giovanni di Paolo (Italian, 1403-1482); 2nd quarter 15th century; Kröller-Müller Stichting (Otterlo, Netherlands))**

JPGR could record deaccessioned works in CONA; No longer in their collections management system

Can also record works at a repository for exhibitions

Works in databases that are being retired, e.g., Art on Screen

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**CONA ID: 700009505 Work Type: film**

Title: Palette of Glass, film about Chagall’s America Windows

Repository Numbers: unavailable

**Creation:** Morgantina (Sicily, Italy)

**LINKS**

• Film about art, in retired STAR Art on Screen DB
  
  *E.g., Palette of Glass, film about Chagall’s America Windows*
Let’s consider important linking characteristics of CONA that could be interesting for research and discovery in future
Possible implementations of CONA

CONA has thesaural relationships: equivalence, hierarchical, associative

Title: Mogao Caves Complex
Title: Grottes de Mogao
Title: 莫高窟
Record Type: built work
Catalog Level: complex
Classification: architecture
Work Type: complexes (buildings)
Creator: various artists
Date: 4th to the 14th century
Location: Mogao caves (ancient site) (Dunhuang, China)

Desc. Note: 492 cells and cave sanctuaries in Mogao are famous for statues and wall paintings, spanning 1,000 years of Buddhist art.

Title: Mogao Cave 275 room, space
Title: Buddha from Cave 275 a sculpture

Links

…………. Built Works by class: religious, ceremonial
…………. Mogao Caves
…………. Mogao Cave 158
…………. Mogao Cave 16
…………. Mogao Cave 17
…………. Mogao Cave 275
Possible implementations of CONA

- Reconstructed disassembled works held in different repositories or locations
- Common with manuscripts, paintings, sculpture, architecture, etc.
- May be varying opinions on reconstructions

Possible implementations of CONA

architecture never built
CONA ID 7000xxxx

Movable works linked to unrealized work

J R Pope’s designs for pyramidal Lincoln Memorial, Washington DC

CONA ID 700008523

Images may be under additional copyright
Possible implementations of CONA

Movable works linked to conceptual work

Conceptual works
Multiples, Series of works

Single print cataloged as an item

- Print at a museum or special collection is cataloged as an item
- Unique physical item = linked to conceptual record

CONA ID 700000091  Cat. Level: Item  Class: print
Title: Great Wave at Kanagawa
Katsushika Hokusai (Japanese, 1760-1849); published by Nishimura Eijudo (Japanese, 19th century)
Mat & Tech: woodcut, color woodcut
Specific: Mount Fuji, ocean wave

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Possible implementations of CONA

Movable works linked to conceptual work

Unique physical item → conceptual record for print → a series
Possible implementations of CONA

Value added: Contributions to CONA are reconciled with the Getty vocabularies

CONA record

CONA ID: 700002850
Catalog Level: item
Classification: vessels
Work Type: vase
Title: Blue and White Glazed Globular Vase
Creator: unknown Chinese
Creation Date: 1403/1424 CE
General Subject: utilitarian objects
Specific: animal, dragon
Current Location: National Palace Museum (Taipei, Taiwan)
Repository Number: 012547N000000000
Dimensions: 42.9 cm high and 9.7 cm diameter; foot diameter 15.8 cm
Mat & Tech: blue and white porcelain, porcelain (material), blue-and-white (ceramic glaze)

AAT record

ID: 300132254
Terms:
  - vases (vessels, containers by form), <containers by form>, ... Furnishings and Equipment
  - vase
  - vase (C,U,English,A)
  - vase (French-P,D)
  - vase (C,U,Chinese,A)
  - vase (D,U,German,A)
  - vase (i), P
  - vase (U,U,U)
  - vase (U,U,U)
  - vase (U,U,U,U)
  - vase (P,U,U,U)
  - vase (C,U,Italian,A)
  - vase (P,U,U,U)
  - vase (C,U,Spanish,A)
  - vase (C,U,Spanish,A)
  - vase (C,U,Spanish,A)
  - vase (C,U,Spanish,A)
  - vase (C,U,Spanish,A)
  - vase (C,U,Spanish,A)

LINKS

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CONA ID: 700002923
Catalog Level  item  Classification  architecture
Work Type  building complex | temple
Title/Name  Temple of Heaven (en)
Tian Tan (zh-tr) | T’ien-t’an (zh-tr) | 天坛 (zh)
| 天壇 (zh) | 천단 (ko)
Creator [display] first built by Ming Chengzu (1360-1424); extended by Ming Shizong (1507-1567); renovated by Qianlong (1711-1799)
Creation Date [display]: 1530, during Ming dynasty
General Subject  architecture Type: isness
Specific Earth [TGN 7030638] Extent: dedication
Current Location  Beijing (Beijing Shi (municipality), China) (nation)  Address Note: 39°57′05″N 116°24′36″E
Dimensions [display] entire complex: 237 hectares
Mat & Tech [display] wood and stone [wood AAT 300011914 | stone AAT 300011176]
Style: Chinese [AAT 300018322] | Taoist [AAT 300143666]
Contributors JPGM VP GRISC BWR
Sources Built Works Registry BWR3792244; Library of Congress Authorities online (2002-) n2011019454; Fodor’s Travel (2016); J. Paul Getty Museum, collections online (2000-); Great Buildings Online (1997-)

Possible implementations of CONA

- CONA ID uniquely identifies the work in CONA
- Links to other IDs, such as LOC, VIAF, BWR
**Adoration of the Magi**

**Creator:** Bartolo di Fredi (Sienese painter, active by 1353, died 1410)

**Creation Date:**
- *execution* Start Date 1380 End Date 1399
- *alternative date* Start Date 1395 End Date 1409

**General Subject:** religion and mythology | human figures

**Specific:** Adoration of the Magi **Extent:** foreground | Siena | horses | Holy Family | gold | frankincense | myrrh | Journey of the Magi **Extent:** background | king | deity | death | Epiphany | Three Ages of Man

**Current Location:** Pinacoteca Nazionale di Siena (Siena, Italy);

**Repository No:** no. 104

**Dimensions:** 195 x 158 cm (76 x 61 5/8 inches)

**Mat & Tech:** tempera on panel

**Contributors:** BHA  VP  CD  PNS  GRI-PA

**Sources:**
- Pinacoteca Nazionale di Siena (2002-)
- Boucher and Fiorini, Magi Reconstructed (2012)
- Cole, Sienese Painting (1985)
- Freuler, Bartolo di Fredi (1994)
- Harpring, Bartolo di Fredi (1992)
**CONA ID:** 700000178

**Catalog Level** item  

**Classification** paintings  

**Work Type** panel painting | altarpiece  

**Title** Adoration of the Magi  

**Creator** Bartolo di Fredi (Sienese painter, active by 1353, died 1410)  

**Creation Date** 1380s/1390s; some scholars date it ca. 1400 or later  

**Execution** Start Date 1380  End Date 1399  

**Alternative Date** Start Date 1395  End Date 1409  

**General Subject** religion and mythology | human figures  

**Specific** Adoration of the Magi  

**Extent:** foreground | Siena | horses | Holy Family | gold | frankincense | myrrh | Journey of the Magi  

**Extent:** background | king | death | Epiphany | Three Ages of Man  

**Current Location** Pinacoteca Nazionale di Siena (Siena, Italy); Repository No. 104  

**Dimensions** 195 x 158 cm (76 x 61 5/8 inches)  

**Mat & Tech** tempera and gold leaf on panel  

**Contributors** BHA VP CD PNS GRI-PA  

**Sources** Pinacoteca Nazionale di Siena (2002-); Boucher and Fiorini, Magi Reconstructed (2012); Cole, Sienese Painting (1985); Freuler, Bartolo di Fredi (1994); Harpring, Bartolo di Fredi (1992)
Possible implementations of CONA

**CONA ID 7000012**  Class: Pre-Colombian art

**General Subject:**
- religion and mythology [General Subject ID 31801]

**Specific Subjects:**
- Xibalba (Mayan underworld) [IA 1000045]
- Baby Jaguar (Mayan king, ruled ca. 317 BCE) [ULAN 500329587]
- man (male human) [AAT 300025928]
- skeleton (animal component) [AAT 300191778]
- ax (weapon) [AAT 300024664]
- altar [AAT 300003725]
- death [AAT 300151836]
- celebration [AAT 300152441]

Value added: Contributions to CONA may be indexed for subject depicted access

OCLC survey, of core fields missing is subject depicted
Mining titles and text for subjects depicted, missing from museum data
Controlled by AAT, ULAN, TGN, CONA, and IA
Examples in CONA

*Arc de triomphe de Louis XIV a la porte St. Antoine* (print – with link to built work)  [http://vocab.getty.edu/page/cona/700001650](http://vocab.getty.edu/page/cona/700001650)

**Case Study House 21** (architectural drawing – with link to built work): [http://vocab.getty.edu/page/cona/700000120](http://vocab.getty.edu/page/cona/700000120)

*Equestrian Portrait of Philip IV* (study photograph – link to work depicted*) [http://vocab.getty.edu/page/cona/700008701](http://vocab.getty.edu/page/cona/700008701)

*Palette of Glass* (Art on Screen): [http://vocab.getty.edu/page/cona/700009505](http://vocab.getty.edu/page/cona/700009505)

*Florentine Codex* (subject of research): [http://vocab.getty.edu/page/cona/700009561](http://vocab.getty.edu/page/cona/700009561)

[Example in IA] Xibalba: [http://vocab.getty.edu/page/ia/901000045](http://vocab.getty.edu/page/ia/901000045)
What comes next?

• Conclusion
Conclusion

linchpins
SN: Pins inserted through the end of an axletree to secure the wheel or other part from sliding off the axle

• The Getty vocabularies are used to link to each other and to Getty resources and outside resources
**Conclusion**

- The Getty vocabularies are constructed to allow their use in linked data
- Releasing the Getty vocabularies as Linked Open Data = transformative effect on research

**Digitizing data does not necessarily ensure that it will be usable or used**

- Continue to investigate optimizing and exploiting the power of the Getty vocabularies
- Working with the broader user community to improve possibilities for research and discovery
- Look for: possibly Reconciliation Tools; LOUD (“usable”); Linked.Art (exchange format)
  [Getty Digital]