The Getty Vocabularies: Status & Multilinguality

Multilingual Vocabulary Group Meeting
Getty Research Institute
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Patricia Harpring
Managing Editor
Getty Vocabulary Program

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The Getty Vocabularies in Brief

- **Art & Architecture Thesaurus**® (AAT)
  - 34,000 'records'; 131,000 terms

- **Getty Thesaurus of Geographic Names**® (TGN)
  - 895,000 'records'; 1,115,000 names

- **Union List of Artist Names**® (ULAN)
  - 127,000 'records'; 375,000 names

- **Cultural Objects Name Authority**™ (CONA)
  - under development; available for contributions in 2011

- All focus on the Visual Arts and Architecture
- They grow through contributions from the user community
- The vocabularies are compiled, maintained, distributed by the Getty Vocabulary Program, at the Getty Research Institute in Los Angeles

http://www.getty.edu/research/conducting_research/vocabularies/
 Getty Vocabularies

- AAT terms = generic concepts
  - (e.g., watercolors, amphora)
- TGN names = administrative, physical places
  - (e.g., Los Angeles, Ottoman Empire, Bavarian Alps)
- ULAN = person, corporate body names
  - (e.g., Christopher Wren, Altobelli & Molins)
- CONA = titles/names of art and architecture
  - (e.g., Mona Lisa, Empire State Building)

Each vocabulary record is identified by a unique, persistent numeric ID

Contributed records are merged as necessary

i.e., if multiple contributors submit records for the same concept (AAT), person (ULAN), place (TGN), or object/work (CONA), the information is merged into one record, with contributors noted at certain key fields
The compiled Getty vocabularies are copyrighted by the J. Paul Getty Trust.

They are licensed to institutions and businesses; over 330 licenses have been negotiated.

Currently, AAT, TGN, and ULAN are licensed with fees adjusted differently for for-profit and not-for-profit institutions; currently licenses are renewed every five years; CONA licensing details are not yet determined.

Data files are released annually in XML and relational tables. New releases of full data files for AAT, ULAN, and TGN were available in June 2010. The data files are released annually, in June or July of each year.

Also available via Web services APIs; refreshed every two weeks.

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Getty vocabularies are implemented in collections management systems, in which thousands of users access the vocabularies.

They are also available through a search screen online, averaging over 180,000 queries per month.

The Getty vocabularies are among the top resources accessed on the Getty Web site.
We track online user activity monthly; average over 180,000 queries per month for all three vocabularies; represented in the quarterly report illustrated above.

In this sample quarter, users of the Vocabularies online represented around 130 nations, with the heaviest usage coming from the following nations: USA, Canada, UK, Switzerland, Germany, Italy, Australia, France, India, Spain, Poland, Belgium, Japan, Russia, Greece, Taiwan, Portugal, and the Netherlands. The CDWA as retained its recent rise in ranking among the most used resources at the Getty Research Institute.
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The AAT, ULAN, and TGN were begun in the mid-1980s to meet the needs of the art museum, visual resources, archives, and art library communities. Authoritative vocabularies were conceived to aid in the indexing and retrieval of art information.

Each vocabulary was conceived and constructed differently. Since 1990s, all three have been united with the same core data structure and editorial rules. Planning for CONA was begun in 2004. Instruction for use of and contribution to the Getty vocabularies at conferences and online training materials can be found at:

http://www.getty.edu/research/conducting_research/vocabularies/training.html
• The Getty vocabularies are used by various audiences
  • by catalogers or indexers who are describing works of art, archival materials, visual surrogates, or bibliographic materials
  • by researchers
  • by systems implementers creating search tools to enhance end-user access to online resources

• The Getty vocabularies comply with national and international standards for thesaurus construction.

• We are active in the standards-building communities
Thesauri

- Thesauri: 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

As with AAT, TGN, ULAN, and CONA, these thesauri are in compliance with ISO and NISO standards.

Equivalence relationships: The relationships between synonymous terms or names for the same concept, typically distinguishing preferred terms (descriptors) and variants.
Thesauri

- Thesaurus: A semantic network of unique concepts
- Thesauri may be monolingual or multilingual
- Thesauri may have the following three relationships:
  - Hierarchical relationships: Broader and narrower (parent/child) relationships between concepts; hierarchical relationships are generally either whole/part or genus/species; may be polyhierarchical, meaning that each child may be linked to multiple parents.
  - Associative relationships: The relationships between concepts that are closely related conceptually, but the relationship is not hierarchical because it is not part/whole or genus/species.
  - Equivalence relationships: The relationships between concepts that are closely related conceptually, but the relationship is not hierarchical because it is not part/whole or genus/species.

Objects Facet
- Furnishings and Equipment
- Containers
- Vessels for serving / consuming
- Stirrup cups
- Coaching glasses
- Hunting glasses
- Sturzbechers
- Sturtzbecher
- Stortebekers
- Rhyta
- Rhyton
- Rheon
- Ritón

Images from getty.edu, metmuseum.org, other museum sites
Vocabularies are data content resources
Compliant with various standards

http://www.getty.edu/research/conducting_research/standards/cdwa

Categories for the Description of Works of Art (CDWA)

CDWA is a standard for elements of art information, guidelines for cataloging
Over 530 subcategories
Consensus between museums, art historians, archives, libraries, visual resources
Published in 1996, updated regularly
CCO includes rules for cataloging based on a subset of CDWA
Visual Resources Association (VRA) Core Categories, published by ALA 2006

- Usually compliant with AACR
- Getty Vocabularies use LOC data as source where appropriate
Where there is overlap, generally the ULAN preferred name is the same as the name in the LC authorized heading.

Name is flagged, and LC control number captured.

Standards are mapped to each other on Metadata Standards Crosswalk.
We present at conferences, workshops
Write books about vocabularies and standards

Coverage & Status of
the Getty Vocabularies
simplified Entity Relationship Diagram for 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

Terms also identified by an ID

All four Getty vocabularies have a common structure

ASSOCIATIVE RELATIONSHIPS
links between subjects, dates

Equivalence relationships between terms/names that are linked to the same concept ID

Hierarchical relationships between different concept IDs; each record is linked to its immediate parent

Associative relationships between different concept IDs; are reciprocal

Relationship Diagram for Getty Vocabularies

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

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Associative relationships between different concept IDs; are reciprocal
Elements of a ULAN record

- **names**
  - Gaudí, Antoni
  - Antoni Gaudi
  - Gaudí y Cornet, Antonio
  - Cornet, Antoni Gauí
  - Gaudi i Cornet, Antoni

- **artist**
  - 500014514

- The Focus of each vocabulary record is a concept - not a “term”
- Conceptual record identified by unique numeric ID
- Linked to each artist record are names, related artists, sources for the data, and notes
**Elements of a ULAN record**

- **names**
  - Gaudí, Antoni
  - Antoni Gaudi
  - Gaudí y Cornet, Antonio
  - Cornet, Antoni Gauí
  - Gaudí i Cornet, Antoni

- **artist**
  - 50014514

- **life dates**
  - Birth Date: 1852
  - Death Date: 1926

- **roles**
  - architect,
  - landscape architect,
  - furniture designer

- **geographic location**
  - Reus (Spain)
  - Barcelona (Spain)

- **nationalities**
  - Catalan, Spanish

- **sources**
  - Contemporary Architects (1987);
  - Enciclopedia universal ilustrada (1978-1983);
  - Encyclopedia of world art (1959-1987);
  - Grove Dictionary of Art online (1999-);
  - LC Name Authority Headings [online] (2002-)

- **related people**
  - studied with Juan Martorell Montells

**SCOPE OF ULAN**

New additions to ULAN must be within scope

- Scope is from Antiquity to the present
- Identified individuals or groups of individuals working together (corporate bodies)
- Involved in the conception or production of visual arts and architecture
- May include artists, architects, craftsmen, as well as people and corporate bodies closely related to artists, including rulers, prominent patrons, museums and other repositories of art
ULAN news and current development:

- Adding nonwestern artists, current and historical, including Chinese, Japanese, other Asian, Native American, and others
- Adding contemporary artists, particularly those collected by museums and special collections; artists noted in the Pacific Standard Time exhibition
- Adding types of artists that are not currently in ULAN, such as mail artists, interior design artists, illustrators, calligraphers, etc.
- Adding names of repositories of art
- Ongoing processing of contributions: Witt Library (Courtauld), architects and firms from Avery Index of Architectural Periodicals, artists from the Provenance Index, 10,000 repositories from VRA/IU project

ULAN news and current development:

- Unknown artists facet added to ULAN in 2009
- Contains appellations used for creators of art and cultural objects when the name of the artist is unknown, and the culture of creation is used instead of artist, e.g. "unknown Inca" or "unknown Nigerian"
- The appellations comply with rules in CCO and CDWA
Elements of a TGN record

enames
Munich
München
Monaco
Munichen

place
7004333

 Getty Thesaurus of Geographic Names
TGN
Elements of a TGN record

place
Munich
München
Monaco
Munich

names
Munich
München
Monaco
Munich

parent place
Germany
Bavaria
Oberbayern

place types
inhabited place
state capital

coordinates
48°08' N, 011°35' E

notes
Capital of Bavaria and the third-largest city in Germany; is situated on both sides of the Isar River, north of the Alps. Henry the Lion, duke of Bavaria, established it in 1157 as a mint and market for Benedictine monks from Tegernsee ...

sources

SCOPE OF TGN

New places in TGN must be within scope

- TGN places include political entities and physical features
- Scope is global, some extraterrestrial
- Includes all current continents and nations
- Historical places, including nations and empires
- Prehistory to the present

- Real places, not mythical
- May include formerly inhabited places, historical places with unknown exact locations “lost settlement”
- Focus on places important to art and material culture
TGN news and current development:

- Updating the modern hierarchy of administrative divisions (last done in 1998)
- Adding archaeological sites, World Heritage Site names, and other historical sites, focusing on Asian, Pre-Columbian, Middle Eastern, and others
- Building historical hierarchies for historical nations and empires
- Ongoing projects of processing contributions, occasional Getty, first files from National Geospatial Intelligence Agency (formerly NIMA; includes non-domestic place names and coordinates) have been preprocessed and loaded, including the file for Italy

Art & Architecture Thesaurus
AAT
Elements of an AAT record

names/terms
travertine
travertine marble
travertine stone
roachstone
lapis tiburtinus

concept
300011329

related concepts
tufa
onyx marble

scope note
A dense, crystalline or microcrystalline limestone that was formed by the evaporation of river or spring waters. It is named after Tivoli (Tibur in Latin).

parent concept
Materials Hierarchy

sources
Sturgis, Dictionary of Architecture and Building (1902);
Roberts, Construction Industry Thesaurus (1976);
Brady and Clauser, Materials Handbook (1977);
**SCOPE OF AAT**

- **Scope is from prehistory to the present**
- **No geographic limitations**
- Terms for concepts, activities, and objects discussed within the literature of the fields of art, architecture, decorative arts, archaeology, material culture, art conservation, archival materials, or related topics

- **Concepts identified by terms excluding proper names**
- Thus it can be described as containing information about *generic concepts* (as opposed to proper nouns or names)
- Must fit into the hierarchies already established in the AAT

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<tr>
<th>Associated Concepts</th>
<th>Physical Attributes</th>
<th>Styles and Periods</th>
<th>Agents</th>
<th>Activities</th>
<th>Materials</th>
<th>Objects</th>
</tr>
</thead>
</table>

**AAT news and current development:**

- **Qualifier in the data structure:** The editorial system, VCS, has been upgraded to better accommodate qualifiers in multilingual data
  - Previously had been only one qualifier per term
  - However, the same term may be appropriate for multiple languages, while the qualifier for different languages should be different (e.g., English: *gouache (paint)*, Spanish: *gouache (pintura)*; French: *gouache (pientre)*)

- **Revised data structure:** the Qualifier is repeating for each term

- **Import XML formats, online Web contribution forms, and licensed files** have been updated to accommodate the new structure
AAT news and current development:

- Keeping up to date with new media where technology used in artwork is rapidly changing
- Adding styles, work types, tools, and materials for non-Western art, contemporary art, decorative arts, and others
- Corporate body counterparts for building types (e.g., museums (buildings), museums (institutions))
- Processing contributions (Spanish, Italian, etc.), cleaning up non-synonyms currently included as UF in legacy records, adding missing scope notes
- Advising and training re. Conservation Thesaurus

AAT news and current development:

- Multilingual AAT terms:
  - Spanish from Centro de Documentación de Bienes Patrimoniales, Chile; delivered and online
  - Chinese translation is underway by the TELDAP (Taiwan E-Learning and Digital Archives Program
  - German translation is being undertaken by the Institut für Museumsforschung in Berlin
  - Dutch translation from the Rijksbureau voor Kunsthistorische Documentatie; they also hope to begin contributing new terms to the AAT
  - Integration is underway for around 3,000 Italian object type terms from ICCD, Rome
  - Full set of 3,000 French terms from CHIN has been fully integrated
Cultural Objects
Name Authority
CONA

Elements of a CONA record

- titles/names
  - Irises
  - Les Iris
  - Piante di iris
  - Die Irisse
  - Irysy
  - Iriissen

- work
  - 800123

record is identified with a persistent unique numeric ID
### Elements of a CONA record

| **titles/names** | Irises  
|                 | Les Iris  
|                 | Piant di iris  
|                 | Die Irisse  
|                 | Irisen  
| **creator**     | Vincent van Gogh (Dutch, 1853-1890)  
| **date**        | 1889  
| **work type**   | painting  
| **style**       | Post Impressionist  
| **materials**   | oil on canvas, applied with brush and palette knife  
| **measurements** | 71 x 93 cm (28 x 36 5/8 inches)  
| **subject**     | botanical nature  
|                 | irises  
|                 | regeneration  
|                 | soil  
| **current location** | Paul Getty Museum (Los Angeles, California, United States)  
|                 | Saint Rémy de Provence (Provence Alpes Côte d’Azur, France)  

**notes**

This work was painted when the artist was recuperating from a severe attack of mental illness; it depicts the garden at the asylum at Saint Rémy...

**work**

800123

---

### CONA Equivalence Relationships

#### Titles/Names:

- **Eiffel Tower**
  - Preference: preferred
- **Tour Eiffel**
  - Preference: alternate
- **Torre Eiffel**
  - Preference: alternate
- **Eiffelturm**
  - Preference: alternate
- **Three-Hundred-Meter Tower**
  - Preference: alternate
  - Title Type: former

**Titles and alternate titles to refer to same work**

---

*Image: Encyclopedia Britannica online*
CONA Hierarchical Relationships

*Catalog Level:* component
*Class:* prints and drawings
*Work Type:* engraving
*Title:* Spring Flowers in a Chinese Vase
*Creator:* Maria Sibylla Merian (German, 1647-1717)

*Relationship Type:* broader context
*Relationship Number:* volume 3 plate 2

Record for the print is linked to separate record for the book as a whole.

---

CONA Hierarchical Relationships

*Whole/part relationships for groups, subgroups, items*
Cat. Level: multiples
Class: prints and drawings
Obj./Work Type: drypoints
Title/Name: Christ Presented to the People
Creator: Rembrandt van Rijn (Dutch, 1606–1669)
Description: Rembrandt treated this large drypoint almost as a painting, making marked changes to the composition as he reconceived the scene over and over. In the sixth state of the print, he removed much of the original crowd that stood directly below the main event and replaced it with two brick arches over an unidentified chasm. Between the arches he also added a sculpted male figure, lightly covered over in this, the final, state. The iconographic significance of these changes remains a mystery, but compositionally they serve to thrust the viewer into direct confrontation with Christ’s fate.

Source: Metropolitan Museum of Art online

- Whole/Part Records for multiples from same plate

CONA Associative Relationships

Relationships are reciprocal

Jean-Auguste-Dominique Ingres; Study for the Dress and the Hands of Madame Moitessier; 1851; graphite on tracing paper, squared in black chalk; 13 15/16 x 6 5/8 inches; J. Paul Getty Museum (Los Angeles, California); 91.GG.79

Jean-Auguste-Dominique Ingres; Madame Moitessier; 1851; Samuel H. Kress Collection, National Gallery of Art (Washington, DC); 1946.7.18
• One work may be depicted in another work, e.g., architectural drawing, etc.
• E.g., record for photo as work of art linked to the architectural built work
• The other work may be both a Related Work and the Subject
• E.g., when contributor of photo record does not have a full catalog record for the architecture

### Hagia Sophia

**Church of the Holy Wisdom**

Ayasofya

Agia Sofia

Hagia Sophia

Sancta Sophia

Sancta Sapientia

Saint Sophia

St. Sophia

Αγία Σοφία

**Multiple titles/names refer to the same work**
Data Elements in CONA

- Minimum fields and editorial rules of CONA are in compliance with CDWA and CCO
- Works are identified with a unique and persistent numeric ID
- Given that CONA is an authority, it is important that records contain enough other minimum information to allow users of CONA to clearly identify each work uniquely, in order to prevent users from unintentionally linking to the wrong work.

Catalog Level
Object/Work Type
Title/Name
Creator
Creation Date
Materials/Techniques
Measurements
Depicted Subject
Current Location

- The minimum fields in a CONA record are the types of information typically captured in a visual resources catalog, repository catalog records, or included on a museum wall label.

Cultural Objects Name Authority CONA

*Titles/Names:*
- Hagia Sophia  *Pref: preferred*
- Church of the Holy Wisdom
- Ayasofya  *Language: Turkish*
- Agia Sofia
- Agia Sophia
- Haghia Sophia
- Sancta Sophia  *Language: Latin*
- Sancta Sapientia
- Saint Sophia
- St. Sophia
- Αγία Σοφία

*Current Location: *Istanbul (Marmara region, Turkey)

*Location type: geographic  Repository ID:*

*Display Creator:*
- architects: Anthemios of Tralles (Byzantine architect and mathematician in Asia Minor, ca. 474-ca. 534) and Isidoros of Meletus, the Elder (Byzantine architect and engineer in Asia Minor, active mid-6th century)

*Related People/Corporate Bodies:*
- Anthemios of Tralles  *Role: architect*
Cultural Objects Name Authority CONA

**Catalog level:** item

**Titles/Names:**
- Hagia Sophia  *Pref:* preferred
- Holy Wisdom
- Ayasofya  *Language:* Turkish
- Agia Sofia
- Agia Sophia
- Haghia Sophia
- Sancta Sophia  *Language:* Latin
- Sancta Sapientia
- Saint Sophia
- St. Sophia
- Ἁγία Σοφία

**Current Location:** Istanbul (Marmara region, Turkey)

*Location type:* geographic  *Repository ID:*

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

**Related People/Corporate Bodies:**
- Anthemios of Tralles  *Role:* architect
- Isidoros of Miletus  *Role:* architect

Display fields and controlled fields; use lists and links to other Getty Vocabs
**Display Creation Date:** original structure dated from 4th century CE; present structure built 532-537 CE; rebuilt in 12th century

- **start:** 532
- **end:** 9999

**Classification:** architecture

**Object/Work Type:**
- **church**
  - **Display Date:** from 4th century
  - **start:** 300
  - **end:** 1500

- **mosque**
  - **Display Date:** under Ottomans
  - **start:** 1400
  - **end:** 1934

- **museum**
  - **Display Date:** since 1934
  - **start:** 1934
  - **end:** 9999

**Technique/Medium display:** system bearing masonry, centralized plan; interior surfaces are sheathed with polychrome marble, porphyry, and mosaics

**Material Names:**
- masonry
- marble
- porphyry
- mosaics

**Technique Names:**
- load-bearing walls
- centralized plan

**Measurements display:**

- **central dome:**
  - diameter: 31 meters (102 feet)
  - height: 56 meters (184 feet)

  - **value:** 31
  - **unit:** m
  - **type:** diameter

  - **value:** 56
  - **unit:** m
  - **type:** height
**Depicted Subject** controlled by list for General, by AAT, ULAN, TGN, CONA, and Subject Authority

**Depicted subject:**

**general:** architecture  
religion/mythology

**specific:** Holy Wisdom (Christian iconography)

**Descriptive Note:** Nothing remains of the earlier two basilicas on this site: a 4th-century church and a 5th-century one built by Constantius, the son of Constantine the Great, which burned during the Nika riots of 532. The current church was rebuilt …

**Related Works:**

**Sources:** Fletcher, History of Architecture (1987)

**Page:** 286 ff.

**Broader Context:** Built Works

---

**Catalog level:** item

**Names/Titles:**

Great Wave at Kanagawa  
Pref: preferred  
Type: repository

In the Hollow of a Wave off the Coast at Kanagawa  
Pref: alternate

La Vague  
Language: French

Die große Welle  
Language: German

Kanagawa oki nami ura  
Language: Japanese transliterated

神奈川沖浪裏  
Language: Japanese
**Current Location:** Metropolitan Museum of Art (New York, New York, USA)  
**Location type:** corporate body  
**Repository ID:** JP1847  
**Credit Line:** H. O. Havemeyer Collection, Bequest of Mrs. H. O. Havemeyer, 1929  
**Display Creator:** Katsushika Hokusai (Japanese, 1760-1849); published by Nishimura Eijudo (Japanese, 19th century)  
**Related People/Corporate Bodies:**  
- Hokusai, Katsushika **Role:** printmaker  
- Nishimura Eijudo **Role:** publisher  

**Display Creation Date:** ca. 1831/1833  
**Start:** 1828  
**End:** 1836  
**Classification:** prints  
**Object/Work Type:** color woodcut  
**Technique/Medium display:** woodcut, polychrome ink and color on paper  
**Material:**  
- polychrome ink  
- paper  
- color (pigment)  
**Technique:**  
- woodcut  
**Measurements display:** 25.7 x 37.9 cm  
(10 1/8 x 14 15/16 inches)  
- **Value:** 25.7  
- **Unit:** cm  
- **Type:** height  
- **Value:** 37.9  
- **Unit:** cm  
- **Type:** width
Inscription: transliterated signature: Hokusai aratame Iitsu hitsu

Depicted Subject:
general: •seascape
specific: •wave •fishermen •boat
  •Mount Fuji (Chubu, Japan)
  •Kanagawa (Kanto, Japan)

Style: Edo
Culture:

Descriptive Note: The large wave dominates the scene, with the small mountain in the background. It is said to have inspired said to have inspired both Debussy's "La Mer" and Rilke's "Der Berg"...

Related Works:
Sources: Metropolitan Museum of Art online (2001-) Page: accessed 10 June 2010

Broader Context:
Movable Works
Katsushika Hokusai (Japanese, 1760-1849); Thirty-six Views of Mount Fuji: First Series; 1827-1837
Growth of CONA relies upon contributions from the user community

Contributions may be made in bulk

Or one at a time via the online contribution form

Contributing via XML

- Requires mapping your fields to the appropriate fields in the CONA XML import format
- Or mapping to CDWA Lite (LIDO under development)
- You must include the minimum required data for each vocabulary record
- If you don’t have the minimum data, you could fill in default values
- Or use the Web form instead of XML
CONA news and current development:

- VCS (editorial system) is in alpha testing
- Editorial manuals will be online in September 2010
- Contributions will be accepted beginning in 2011
- CONA will be online, with limited data, in 2012
- When critical mass is available through contributions, licensing options will be announced

For those who wish to enter records one at a time
GCI’s Project: Conservation Thesaurus (CT)

- Getty Conservation Thesaurus (CT)
- The Getty Conservation Institute is creating the Conservation Thesaurus, which it is developing in collaboration with the conservation community.
- It will be integrated within the Art & Architecture Thesaurus.
- But will be optimized to support a variety of displays and functions specifically tailored to the conservation field.
- Including searching, indexing, cataloging, and the retrieval of conservation information.
Contributions for CT will be integrated in the AAT.

New facets are being added to the AAT as necessary (e.g., for the brand names of chemicals).
• Getty vocabulary terms and associated information are valued as authoritative because they are derived from published sources and represent current research and usage in the art history community

• Compiled in large part from contributions from the user community, including various Getty projects and qualified outside institutions
• Institutions may make contributions in bulk in our prescribed XML format or via an online form
• Bulk contributions can range from a few thousand to several million records
• Contributions are vetted, managed, edited, augmented, merged with existing data, placed into hierarchies and other relationships, and published by the Getty Vocabulary Program

• Licensed files are released annually; the data on the Web site is refreshed every two weeks

CONTRIBUTORS TO VOCABULARIES

• The thesauri grow and change over time
• New terms come from Getty projects and authorized outside contributors
• Current contributors include museums, libraries, archives, bibliographic and documentation projects
Institutions may make contributions via an online form
One term at a time
Important for institutions with only a small number of contributions

Or institutions may make contributions in bulk in our prescribed XML format
Bulk contributions can range from a few thousand to several million records
CONTRIBUTORS TO VOCABULARIES

- Vocabulary Program conducts training workshops at the Getty and conferences
- Small staff means contributors should be trained
- Social, but controlled, so that the result remains authoritative

We write and maintain extensive editorial manuals, available online.
Data is loaded and processed regularly according to a prioritized list. For current work, see online newsletter. Overall, emphasis on multilingual and expanding coverage and scope in all vocabularies.
Compiling Data for the Vocabularies

What do we do?

- Loading, tracking who contributed what, editing, quality control, 'moving,' merging, un-moving, un-merging
• General vetting, to be sure incoming record meets our standards

• Merging records: for multiple records contributed for the same person; automated if possible in the load
Names: Del Duca, Giacomo (pref) Jacopo Siciliano

Biography: Italian sculptor and architect, ca. 1520-1604, born in Sicily, active in Rome
ULAN ID: 500016281
Matching for retrieval and merging

- **Retrieval**: Matching end user’s search string to ULAN name / term
  - full name string, exact
  - full name string, normalized
  - truncation
  - key words
  - Boolean operators

- pre-processing of both ULAN data and the end user’s incoming query

Matching for retrieval and merging

- **Merging**: Matching duplicates to allow merging in data loads, records for same artist contributed by multiple contributors
  - We have been finding duplicate records representing the same artist/corporate body for 25 years (*Synoname* in 1985) developing algorithms using data from several museums
  - Sophisticated, workable system developed in the new "Loader" for VCS
  - Balance accuracy and efficiency
  - Some human-intervention always required
  - ULAN merging -- algorithms – tables of roles, nationalities, pivoting on comma, normalizing
Report presents Display data, but matches made on indexed data; editors must extrapolate.

- Matches on normalized names, birth and death dates, roles, nationality.
- Note that roles need not be exact match; tables of equivalents for matching are used to find duplicates.

### Report For All Merged Records Loaded: 06-18-2010

<table>
<thead>
<tr>
<th>New Subject ID</th>
<th>5000020186</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dom:</strong></td>
<td>Abel-Truchet, Louis (French painter, etcher, and lithographer, 1857-1918) 5000020186</td>
</tr>
<tr>
<td><strong>Rec:</strong></td>
<td>Abel-Truchet, Louis (French artist, 1857-1918) 5000299382</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Subject ID</th>
<th>5000056643</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dom:</strong></td>
<td>Abel-Truchet, Louis (French painter, etcher, and lithographer, 1857-1918) 5000020186</td>
</tr>
<tr>
<td><strong>Rec:</strong></td>
<td>Abel-Truchet, Louis (French artist, 1857-1918) 5000299382</td>
</tr>
</tbody>
</table>

### Report for possible matches

<table>
<thead>
<tr>
<th>New Subject ID</th>
<th>500298289</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dom:</strong></td>
<td>Alvarez Alcázar, Gerónimo (Spanish painter, exhibited 1871-1878) 500035166</td>
</tr>
<tr>
<td><strong>Rec:</strong></td>
<td>Alvarez Alcázar, Gerónimo (Spanish artist, 1848-1878) 500298289</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Subject ID</th>
<th>500298338</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dom:</strong></td>
<td>Andrade, Edmond (French painter, graphic artist, and engraver, 1827-1877) 500298338</td>
</tr>
<tr>
<td><strong>Rec:</strong></td>
<td>Andrade, Edmond Marthe Alphonse (French artist, 1827-1877) 500298338</td>
</tr>
</tbody>
</table>

### Report for possible matches

<table>
<thead>
<tr>
<th>New Subject ID</th>
<th>500296979</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dom:</strong></td>
<td>Andrea, Ippolito (Italian painter, 1548-1608) 500021206</td>
</tr>
<tr>
<td><strong>Rec:</strong></td>
<td>Andrea, Ippolito (Italian painter, 1548-1608) 500296979</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Subject ID</th>
<th>500296401</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dom:</strong></td>
<td>Angel, Philips (Dutch painter and engraver, baptised 1616, died at age 68) 500296401</td>
</tr>
<tr>
<td><strong>Rec:</strong></td>
<td>Angel, Philips (Dutch painter and engraver, baptised 1616, died at age 68) 500296401</td>
</tr>
</tbody>
</table>

- This report gives editors lists of near-matches.
- Again, you are seeing display data, but match was done on controlled, indexing fields not shown in this report.
- Require vetting by humans.
- Usually problem with inexact dates, etc.
2.2. Matching Rules

This section describes the matching rules used to match a contributed subject with an existing subject. If all of the following matches, the contributed subject will be merged with the existing subject. If only some of the following matches, say 3 of 4 matches, the contributed subject will be inserted into the UCS database as a new subject. A report of near matches needs to be generated (see Appendix X for the report content and format). While key words are generated and stored in a separate column, and they have their place in Boolean searching and other matching situations, they may not be used for matching because identical key words in a name/term may be very different subjects (e.g., Andrea di Bartolo and Bartolo di Andrea are different people and should not be matched).

2.2.1. Matching Terms

The following method will be used to match terms:

- To find matches and near-matches, various algorithms have been developed.
- May be customized as necessary for a particular contributed data set.

- There is a normalized version for each normalized term that will be checked before checking to the next matching criterion.
- For terms that do not contain any commas, additional matches need to be done with a plain normalized search.

If a contributed term contains any commas, the comparison will involve pivoting different combinations of the term around the comma.

For terms that contain one comma, for example "Saint Helen's, Mount", the comparison will involve pivoting strings to the left and right around the comma.

Saint Helen's, Mount
Mount Saint Helen's

The resulting strings will then be normalized and all punctuation, diacritic codes, and spaces performed on the following strings:

SAINTHELENSMOUNT MOUNTSAINTHELENS

For terms that contain two commas, for example "Appiani, Andrea, the elder", the comparison will involve pivoting different combinations of the term around the comma. This is necessary because various conventions for using commas in inverted names may result in several possibilities.

Appiani, Andrea, the elder
Andrea Appiani the elder
the elder Andrea Appiani

The resulting strings will then be normalized and all punctuation, diacritic codes, and spaces performed on the following strings:

APPIANIANDREATHE ELDER ANDREAAPIPIAN THE ELDER THEELDERANDREAPIANI

- Pivoting on the comma
- Eliminates issues with "key words", that do not work well with proper names
- Reduces number of false matches that occur with key word matching because order of the terms is maintained
- d'Arpino, Niccolò di Giovanni and d'Arpino, Giovanni di Niccolò are two different people, but key words are the same
- d'Arpino, Giovanni di Niccolò
- punctuation: Giovanni di Niccolò Darpino is the same as d'Arpino, Giovanni di Niccolò
Roles and Nationalities are controlled values; contributor's data is mapped to controlled value.

Tables relate roles and nationalities that should be considered equivalents for the purposes of matching.

E.g., if one record indexes the person as "painter" but another indexes the person as "watercolorist", this is still a match (provided names, nationalities, and dates also match or are equivalent for matching).

Key Words and Boolean for user’s queries

- Names in natural or inverted order (pivot using the comma)
- Retrieval by keywords or normalized strings
- Automatic “anding” or “oring” not successful because it brings back too many results; used for ULAN, AAT, TGN, CONA

**d’Arpino, Eugenio Porretti**
(Italian painter, active 1766) [500091496]

Possible queries from users:
D’Arpino Eugenio Porretti Poretti
d AND Arpino Porretti AND Darpino Arpino Eugenio Eugenio AND Porretti

“Keyword” table created for matching:
darpinoeugeniooporretti
eugeniooporrettidarpino
d
arpino
darpino
eugenio
porretti
• Other criteria for search:
  • Browsing hierarchies
  • ULAN: Nationality, Role

Search the ULAN

Find Name: 
Role: Lookup
Nationality: Lookup

ULAN Nationality Lookup (Research at the Getty) - Microsoft Internet Explorer

Browse: ABCDEFGHIJKLMNOPQRSTUVWXYZ

- Abruzzese
- Afghan
- Afghan
- African
- African-American
- Albanian

• If near-synonyms or generic postings are in a single record, we make several records of one: cradles, cribs, bassinets are different types of beds for babies.
What do we do?

- Building hierarchies
- Determining parent, inserting or moving branches

Hierarchy may change over time

Europe.................(continent)
Polska....................(nation)
Dolnoslaskie..........(voivodship)
Kujawsko-Pomorskie..(voivodship)
Lodzkie...................(voivodship)
Malopolskie..........(voivodship)
Mazowieckie..........(voivodship)
Lubelskie.............(voivodship)
Lubuskie..............(voivodship)
Opolskie...............(voivodship)
Podkarpackie.........(voivodship)
Podlaskie.............(voivodship)
Pomorskie............(voivodship)

former voidovships........(miscellaneous)

- Campaigns to correct issues
- E.g., to update a nation's administrative units
Preferred name / term changes

Names:

Congo (C,V)
République démocratique du Congo (C,V)
Congo, république démocratique du (C,V)
Democratic Republic of the Congo (C,V)
Zaire (H,V)
République du Zaïre (H,V)
Zaïre (H,V)
Republic of Zaire (H,V)...................... used 1971-1997
Kongo, Republik (H,V)
Belgisch Congo (H,V)...................... 1908-1960
Congo Belge (H,V)
Belgian Congo (H,O)...................... 1908-1960
Congo Free State (H,O) ..................... 1885-1908

• We work to keep up to date with preferred terms and names
• Former preferred name was “Zaire”
• Changed to “Congo”

Ensuring quality control

• Editorial Guidelines
  • For consistency
  • For ensuring that data is correctly retrievable
  • Additions to rules made as new issues arise

• We run regular and special reports to help ensure consistency; global changes when necessary
### 3.1.1.6.4 How to choose the parent

Position terms under the most logical broader term, keeping in mind the particular logic inherent throughout the AAT. Choose the parent based on precedent by consulting records for similar types of concepts in the AAT.

- **Specificity of placement**
  Position the AAT record under the most specific parent possible. Be consistent with the precedent of other records in the same or similar sections of the hierarchies.

- **Is this parent correct?**
  With the descriptor of the concept record in mind, determine if this concept is a type of, kind of, example of, or manifestation of the proposed parent concept. If it is, then a genus/species relationship exists.
  - Make sure that each subset of narrower terms clustered under a broader term is independent and mutually exclusive in meaning. Occasionally meanings may overlap among siblings, but avoid this when possible.
  - Be sure that the genus/species logic holds true upwards through all levels of the hierarchy above the concept.

#### Examples
- [the most specific parent for "soufflé dishes" is "baking dishes"; "soufflé dish" is a "type of" or "example of" all ancestors all the way up the hierarchy; its meaning is exclusive of all its siblings]
- Top of the AAT hierarchies
  - Objects
  - Furnishings and Equipment

### TECHNICAL SOLUTIONS

- The systems in place to allow this work were built and are maintained by a dedicated group from the Getty Information Technology Services (ITS)
- Worked on user requirements and testing in close cooperation with the Vocabulary Program
Technical solutions

Batch loading of data
From various systems
or from online forms
In our prescribed format

VCS: Processing Data
Searching
Merging
Editing/adding info
Moving/adding links

Exporting Data
Reports for quality control
Reports for workflow
Release formats
Web, XML, REL Tab, MARC
Web services

What do we do?

Ensuring quality control

- Computer system,
good reports, and
technical support
are critical

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Ensuring quality control

What do we do?

- Reports are critical
- to find errors
- to track editorial progress
- to plan workflow
- to produce files for release

We use prepared reports and ad hoc reports
In VCS, search with search screen
And via SQL ad hoc reports

Work with ITS to optimize retrieval
Preprocessing, special indexes, algorithms at the time of searching

Normalized strings and keywords for the name “Gogh, Vincent van”

GOGH
GOGHVINCENT
VINCENT
VAN
VANGOGH
VANGOGHVINCENT
VANGOGH

Normalized strings and keywords for the name “Atakora, Cha$ine de l’”

ATAKORA
CHAINE
DE
L
ATAKORACHAINE
CHAINEDELATAKORA
LATAKORA
DELATAKORA
Work with ITS to optimize retrieval
Preprocessing, special indexes, algorithms at the time of searching

E.g., to find articles and prepositions for constructed “keywords”

- Singular/plural issue
- Add and subtract “s” in preprocessing and for the end-user’s query

Find Name: **turkish dome**
Logic: 
Note:

Click the icon to view the hierarchy.
Check boxes to view multiple records at once.

1. **onion domes**
   (domes (architectural element), <domes : the interior of the
   [300301285]
   Turkish domes
domes, Turkish)
### Vocabulary records edited in VCS during 3rd quarter FY10

<table>
<thead>
<tr>
<th></th>
<th>Jan (18 days)</th>
<th>Feb (18 days)</th>
<th>Mar (21 days)</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AAT records</strong></td>
<td>29</td>
<td>1,427</td>
<td>311</td>
<td>1,767</td>
</tr>
<tr>
<td><strong>AAT citations</strong></td>
<td>21</td>
<td>133</td>
<td>17</td>
<td>171</td>
</tr>
<tr>
<td><strong>ULAN records</strong></td>
<td>3,586</td>
<td>2,633</td>
<td>4,431</td>
<td>10,652</td>
</tr>
<tr>
<td><strong>ULAN cites</strong></td>
<td>66</td>
<td>236</td>
<td>37</td>
<td>339</td>
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<tr>
<td><strong>TGN records</strong></td>
<td>2</td>
<td>21</td>
<td>126</td>
<td>149</td>
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<tr>
<td><strong>TGN citations</strong></td>
<td>2</td>
<td>4</td>
<td>70</td>
<td>76</td>
</tr>
<tr>
<td><strong>Total Edited</strong></td>
<td>3708</td>
<td>4,454</td>
<td>4,992</td>
<td>13,154</td>
</tr>
</tbody>
</table>

### Vocab Editing Quotas

- Three editors work full-time on processing contributions
- Editors have quotas in daily work
• Four editors work full-time on processing contributions
• Editors have quotas in daily work

Vocab Editing Quotas

<table>
<thead>
<tr>
<th>Task</th>
<th>Records per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of difficult new records</td>
<td>10</td>
</tr>
<tr>
<td>Extensive Scope/Descriptive Notes, filling in existing records</td>
<td>10-15</td>
</tr>
<tr>
<td>Moderate filling in of records</td>
<td>20-25</td>
</tr>
<tr>
<td>Straightforward data cleanup</td>
<td>70-80</td>
</tr>
<tr>
<td>Moderately detailed data cleanup</td>
<td>35-45</td>
</tr>
<tr>
<td>Merging and moving candidates into publishable hierarchy</td>
<td>90-100</td>
</tr>
</tbody>
</table>

• Priority is to process online contributions
• Set priorities for bulk loaded records (e.g., Avery)
• Editors have quotas, but greatest number possible is 10 to 100 records per week, depending upon the amount of research required for the particular task
• Every year spend 2 months preparing data for the annual licensed files release

Vocab Editing Quotas

<table>
<thead>
<tr>
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</tr>
<tr>
<td>Merging and moving candidates into publishable hierarchy</td>
<td>90-100</td>
</tr>
</tbody>
</table>
The vocabulary databases are increasingly multilingual

- The Getty Vocabularies are not fully multilingual, due to issues of complexity; however Terms/Names/Titles and Descriptive/Scope Notes are repeatable in multiple languages
- TGN and ULAN have many thousands of non-English names, although the languages are not flagged and thus cannot be counted
- AAT: Of the total ca. 200,000 total terms in AAT, 70,000 are not American English: 50,000 are Spanish; 6,000 are French; 6,000 are Italian; 3,000 are British English; 1,600 are German; etc. (these are total records, including candidates not published)
For people’s names, rarely is the name translated into other languages. All languages use the person’s name in the vernacular of the artist.

For only the most famous artists, usually non-modern artists who were popular topics of 19th-century publications, is the name translated.
Languages in ULAN

Giambologna (preferred, display, Italian-P)
Bologna, Giovanni (Italian)
Giovanni Bologna (Italian)
Giovanni da Bologna (Italian)
Bologne, Jean de (French)
Jean de Bologne (French)
Boulogne, Jean (French)
Gian Bologna (Italian)

Artists who were known by multiple names in their lifetime; married names

Corporate Bodies

Ethnological Museum (preferred, English-P)
Ethnologisches Museum (German-P)
Ethnographische Sammlung (historical, German)
Ethnographic Collection (historical, English)
.... name used from 1829
Cabinet of Art and Rarities (historical, English)
Kunst- und Raritätenkabinett (historical, German)

Language often more pertinent with corporate bodies than people since corporate body names are often translated in published sources (while people’s names rarely are)
### Various transliterations

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dai Xi</td>
<td>(preferred, display)</td>
</tr>
<tr>
<td>Dai, Xi</td>
<td>(LC)</td>
</tr>
<tr>
<td>Dài Xi</td>
<td>(Chinese, transliterated Pinyin)</td>
</tr>
<tr>
<td>Tai Hsi</td>
<td>(Chinese, transliterated Wade-Giles)</td>
</tr>
<tr>
<td>Chunshi</td>
<td>(sobriquet)</td>
</tr>
<tr>
<td>Yu’an</td>
<td>(sobriquet)</td>
</tr>
<tr>
<td>戴熙</td>
<td>(Chinese)</td>
</tr>
</tbody>
</table>

*Transliterated names
Preferred name is in the Roman alphabet
Transliterated using ISO standard, if possible

### Various transliterations, diacritics

- Variant transliterations provide access
- Diacritics recorded in code-extended ASCII (e.g., $07$)
- Currently enter Roman only
- Published in Unicode
- Soon allow others, Russian Cyrillic, Chinese, etc.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shishkin, Ivan</td>
<td>(preferred, index, LC)</td>
</tr>
<tr>
<td>Ivan Shishkin</td>
<td>(display)</td>
</tr>
<tr>
<td>Šiškin, Ivan Ivanovič</td>
<td></td>
</tr>
<tr>
<td>Chichkin, Ivan Ivanovitch</td>
<td></td>
</tr>
<tr>
<td>Schischkin, Iwan Iwanowitsch</td>
<td></td>
</tr>
<tr>
<td>Иван Иванович Шишкин</td>
<td></td>
</tr>
</tbody>
</table>

* (= entered as $07Si07$skin, Ivan Ivanovi$07c*
Translations

- Common translations are important variants
- "coined" terms or names are not allowed
- translation must be found in published source

Kicking Bear *(preferred, English-P)*

Mato Wanartaka *(Native American language)*

Anonymous Artist

- For constructed names (i.e., for anonymous creators), preferred name = English for descriptive words in the name (e.g., Master, Monogrammist)

Spitz Master *(preferred, display)*

Master of the Spitz Hours

Maestro Spitz

Rules:
- artist *(preferred)*
- painter
- illuminator
- Gender: male
- illuminator
- Events:
  - active: ca. 1415-1425
- List/Hierarchical Position:
  - Spitz Master
- Biographies:
  - (French illuminator, active ca. 1415-1425)
    - [GROBSC] *Spitz Master*
- Sources and Contributors:
  - Master of the Spitz Hours...
  - Spitz Master... *[VP Pref]*

"Anonymous" artist = appellations are devised by scholars or museums
- when the hand (style), and oeuvre (works) are identified, approximate dates known, but the name of the artist is not known
Married name
Common misspelling

O'Keeffe, Georgia
Georgia O'Keeffe
O'Keefe, Georgia
Stieglitz, Alfred, Mrs.

- published misspellings added to vocabulary
- but anticipated end-user misspellings can be accommodated on retrieval

Former names, “incorrect” names

- Names for 14th-century Sienese painter
- Include spelling variations, former names (e.g., appellations used when the artist was anonymous)

Bulgarini, Bartolomeo
Bartolomeo Bulgarini
Bartolomeo Bulgarini da Siena
Maestro d'Ovile
Master of the Ovile Madonna
Ovile Master
Lorenzetti, Ugolino
Ugolino Lorenzetti
Related People/Corporate Bodies

Jorge Afonso (Portuguese painter and court artist, born ca. 1470-1475, died before 1540)

Master of 1515 (Portuguese painter, active 1515)

Relationship Type: possibly identified with

Related Person:
Master of 1515
 ...(Portuguese painter, active 1515)

- Use for artists who are perhaps the same person
- If scholars are not sure, do not put the names in the same record; use associative rels.

Languages in TGN

Los Angeles (preferred, vernacular, English-P, Spanish-P)
L. A. (vernacular, abbreviation)
Pueblo de Nuestra Señora la Reina de los Angeles de Porciúncula (historical, Spanish) ............ name of original Spanish community on the site

- Variant names in other languages for cities is rare
- The vernacular name is used
- "Vernacular" and "other" are flagged in TGN; often not language by name
- Due to the nature of available data
Languages in TGN

Firenze (preferred, vernacular, Italian-preferred)
Florence (English-preferred)
Florenzia (Spanish-preferred)
Florenz (German-preferred)
Fiorenza (historical, Italian) Medieval
Florentia (historical, Latin) name of Roman colony on N bank of Arno
Florentine (adjectival, English)

- Variant names in other languages for cities is rare
- Typically only for the most famous and those written about in the 19th century
- Historical names may be included, with display and indexing dates associated with the names

Languages in TGN

Pascua, Isla de (preferred, Spanish-P)
Isla de Pascua (Spanish, display name)
Rapa Nui (Rapa Nui-P)
Rapanui (Rapa Nui)
Easter Island (English-P)

- Variant names in other languages for archaeological and historical sites
- Preferred in English and other languages may be flagged
Multiple Vernacular Names

Strasbourg (preferred, vernacular, French-preferred)
Strassburg (vernacular, German-preferred)
Straßburg (vernacular, German-preferred)
Strossburi (vernacular, Alsatian-preferred)
Estrasburgo (other, Spanish-preferred)
Stratburgum (historical, Medieval Latin)
Argentoratum (historical, Ancient Latin)

- multiple vernacular languages
- important to record all
- prefer the one used in standard sources that also prefer the vernacular (e.g., atlas, gazetteer, NGA/NIMA)

Transliterations, diacritics

Tōkyō (preferred,C,V) .......... after replacing Kyōto as Imperial capital, 1868
Tokyo (C,V,English-H,U,N)
東京 (C,V,Japanese-P,V,N)
Tokio (H,O,English,U,N) .......... obsolete spelling
Edo (H,V) .......... during Tokugawa Shogunate beginning 1603
Yeddo (H,V)
Yedo (H,V)

- use of diacritics
- $00 codes (T$01oky$01o)
- Published in Unicode
- Transliterated for "preferred"
Names and Language Flags

- **Al-Urdun** (preferred, Arabic-P)
- **al-Mamlakah al-Urdunnīyah al-Hāshimīyah** (official name, Arabic)
- **Jordan** (English-P)
- **Jordanie** (French-P)
- **Jordania** (Spanish-P)
- **Jordanien** (German-P)
- **Jordaan** (C,O,Dutch-P,U,N)
- **Jordânia** (Portuguese-P)
- **Giordano** (Italian-P)
- **JOR** (ISO3L)
- **JO** (ISO2L)
- **ISO400** (ISO3N)
- **JO00** (FIPS)
- **Transjordan** (historical)
- **Jordanian** (English, adjectival)

Names of nations usually have versions in other languages (but not always, e.g., Côte d’Ivoire)
- preferred vs. official name, not necessarily the longest form
- Codes (ISO)

Historical names, site names

- **Resina** (preferred, Italian) ........ name for modern town on site
- **Ercolano** (Italian) ............ Italian name for the ancient site
- **Herculaneum** (historical, Latin, site name) ............ ancient
- **Herakleion** (historical, Greek) ........... Greek name

- Historical names with languages
- Name of modern town and archaeological site are flagged
Languages in CONA

Hagia Sophia *(preferred, English-P, Greek transliterated-P)*
Holy Wisdom *(English, translated)*
Ἁγία Σοφία *(Greek-P)*
Ayasofya *(Turkish)*
Santa Sofia
Agia Sofia
Sancta Sophia *(Latin)*
Megale Ecclesia

*Title/names in CONA may be flagged in various languages*
*"translated" is a Title Type*

Languages taken from controlled list of language names
- Language list: Uses language name plus numeric codes
- Vocabulary data includes languages not in ISO or Ethnologue, including extinct languages and general terms such as "creolized language"
Languages in AAT

Current situation:

- AAT is in the Roman alphabet
- Base language is English
- Terms and Scope Notes may be represented in other languages
- Displayed and published in Unicode

English descriptors

- color proofs (preferred, descriptor, American English-P)
- color proof (alternate descriptor, American English)
- colour proofs (descriptor, British English-P)
- colour proof (alternate descriptor, British English)
- flat proofs (used for)
- proofs, color (used for)

- English is preferred term, descriptor
- There are separate American English and British English descriptors if spelling is different
Terms in other languages

still lifes (preferred, C,U,D, English-P)
still life (C,U,AD, English)
still-lifes (C,U,UF, English)
still lives (C,U,UF, English)
nature morte (C,U,D,French-P) ... used from the mid-18th century
natura morta (C,U,D,Italian-P)
stilleven (C,U,D,Dutch-P) ... in use from ca. 1650
Stilleben (C,U,D,German-P)
naturaleza muerta (C,U,D,Spanish-P)
nature repose (H,U,UF,French) ... early 18th-century French term

- AAT includes terms in other languages
- Follows capitalization rules of that language

Terms in other languages

hornfels (preferred, C,U,D, English-P)
Hornfels (C,U,D,German-P)
cornéenne (C,U,D,French-P)

- If capitalization differs, the term is considered a different term, even if spelling is otherwise identical
tankas (preferred, C,U,D, English-P, Spanish-P)
tanka (C,U,AD,English, Spanish)
t'angkas (C,U,UF)
thangkas (C,U,UF)
thang-kas (C,U,UF)
thankas (C,U,UF)
thang kas (C,U,UF)

- One term may be the descriptor for multiple languages

Languages are derived from a controlled list, which includes the name of the language and a numeric code (e.g., French / 70271)
Preferred flag for a given language

Preferred term (also a descriptor) is by default the preferred American English (or English, if there is no British Equivalent) term.

For a given language, there is only one preferred term, although there may be multiple non-preferred terms in that language.

Preferred term in a given language should be a descriptor for that language.

### Various transliterations

- chi wara *(preferred)*
- chi-wara
- chiwara
- ciwara
- tyi wara
- tyiwara
- sogoni koun

- Include variant transliterations
- We use sources where terms are already transliterated
- Prefer ISO transliteration

---

**Bamana Headdresses; Bamana peoples; chi wara; wood, iron, fiber; 20th cen.; heights: 55.2 cm and 59.1 cm; National Museum of African Art, gift of Dr. Ernest Anspach and museum purchase**
Coining Terms

**trompe-l’oeil**
(preferred, C, U, D, English-P, French-P)

**trompe l’oeil**
(C, U, UF, American English)

- Do not coin a new term by translating from the other language
- E.g., do not invent a translated English *deceive-the-eye* for the French *trompe-l’oeil*
- All descriptors in the AAT must have warrant from multiple authorized sources
- Do not coin D, AD, or UF
- You may coin Guide Terms

---

Loan Words

**trompe-l'oeil**
(preferred, C, U, D, English-P, French-P)

**trompe l'oeil**
(C, U, UF, English)

- Terms borrowed from other languages that have become naturalized in English
  - lits à la duchesse
  - mihrabs
  - sotto in su
  - Schnitzaltars
  - Rathäuser
- May be both preferred English and preferred other language (French)
Loan Words

- Terms are borrowed with varying degrees of retention of the original spelling
- Plural in English is often Anglicized
- Initial capital in other language may be lowercase in English
- Diacritics may be omitted

Schnitzaltars (preferred, C,U,D, English-P)
Schnitzaltar (C,U,AD, English, German)
Schnitzaltäre (C,U,UF,German-P)

---

Loan Words

violoncellos (preferred, descriptor, English-P)
violoncello (alternate descriptor, English, Italian)
violoncelli (descriptor, Italian-P)
cello (used for, English)
cellos (used for, English)
celli (used for, English)

- Prefer term most commonly found in American English sources
  - violoncellos vs. violoncelli
  - gymnasiuums vs. gymnasias
  - akua’mma vs. akua’bas
  - Other language plural is included
Loan Words

trousseaux (preferred, C,U,D,English-P, French-P)
trousseau (C,U,AD,English, French)
trousseaus (C,U,UF,English)

- Most loan words in English Anglicize the plural
- Some use the plural of the original language

Qualifiers for Homographs

keys (hardware)

keys (sound device components)

keys (texts)

- Homographs are spelled the same, disregarding capitalization and punctuation
- Include a qualifier if the term is a homograph for another term in the AAT
- Or if it is a homograph for another common term in standard language
- Qualifier is recorded in separate field from term; displayed w/parens in publication
Qualifiers for Homographs

keys (hardware)

keys (sound device components)

keys (texts)

• Qualifiers are usually from parent, UFs may use descriptor as qualifier

• May combine both parent-derived and descriptor-derived in same record

Qualifiers for terms in other languages

crowns (headdresses) *(preferred, descriptor, English-P)*
crown (headdress) *(alternate descriptor, English)*
couronnes (coiffures) *(descriptor, French-P)*
couronne (coiffure) *(alternate descriptor, French)*

• Plural qualifier for plural nouns *(headdresses)*, singular qualifier for singular nouns *(headdress)*
Qualifiers for terms in other languages

milagros (ex-votos) (preferred, descriptor, English-P, Spanish-P)
milagro (ex-voto) (alternate descriptor)

- Exception: Qualifier may be in another language
- When source of qualifier is a loan word
- If contributor does not supply qualifier, AAT editors may need to add it in English

• Qualifiers are in the language of the term, if possible
AAT is too complex to be fully multilingual. It is a thesaurus with terms in multiple languages to allow multilingual retrieval.

**kaolinite (pigment)**
(preferred, descriptor, English-P, French-P)

- Same term may belong to several languages; but homographs are not allowed in AAT.
- Thus structure was changed to allow multiple qualifiers for each term (e.g., pigment), attached to language.

Alternate Displays in Various languages

- Not implemented yet in the AAT.
- But consider the implementation in TGN.
- Preferred name is in the vernacular language, when there is one (e.g., continents do not have one (they have many), but nations and below do.
- Where the name also exists in English, it is flagged in TGN.
**English Display:** NOTE that most places do not have an English name.

**Vernacular Display:**

- **Top of the TGN hierarchy** (hierarchy root)
  - ... World (facet)
  - ........ Africa (continent)
  - ............ Egypt (nation)
  - ............ Urban (region)
  - ........... Cairo (government)
  - ........... Al Abbasiyah (neighborhood)
  - ........... Al Basatin (neighborhood)
  - ........... Al Hiliyah (neighborhood)
  - ........... Al Imam (neighborhood)
  - ........... Al Maadi (neighborhood)
  - ........... Al Marj (neighborhood)
  - ........... Al Masearah (neighborhood)
  - ........... Al Matariyah (neighborhood)
  - ........... Az Zamlik (neighborhood)
  - ........... Az Zeitun (neighborhood)
  - ........... Builaq (neighborhood)
  - ........... Cairo (inhabited place)
  - ........... Ezbekiya (neighborhood)

- **Diacritics recorded in code-extended ASCII (e.g., $00)$ in data, maps to Unicode; published and displayed in Unicode
- **Diacritics may occur all fields – all names, notes, date fields, etc.**

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**Diacritics**

- gallery graves (*preferred, descriptor, English-P*)
- gallery grave (*alternate descriptor, English*)
- graves, gallery (*used for, English*)
- all$00eees couvertes (*descriptor, French-P, English*)

`all$00eees couvertes = allées couvertes`
Diacritics and Unicode

ahimsa (<Jain doctrinal concepts>)

**Note:** Refers to the principle of respect for life. Some Buddhists, some Hindu sects, and especially some southern Indian sects regard life as sacred and that violence has negative effects or result in an unfavorable reincarnation. The term is displayed in Unicode.

### Terms:

- **ahimsa** (preferred, C,U,D)
- **ahīṃsā** (English)
- **ahimsā** (English)
- **ahiṃsā** (preferred, C,U,UF)
- **ahiṃsā** (C,U,UF)
- **ahiṃsā** (C,U,UF)
Possible Issues re. Unicode

• Will still need to normalize terms to ASCII for searching and sorting
• Ignoring diacritics, punctuation, spaces, case sensitivity

1. Alā'-ad-Dīn Khalīl (Qaramand, <Anatolian Islamic styles and periods>)
2. Alabama limestone (oolitic limestone, <limestone by composition>)
3. alabaster (mineral) (gypsum, mineral, ... Materials [300011101])
4. alabastra (<containers for personal grooming and hygiene>)
5. alae (alcoves, <rooms and spaces by form>, ... Com)
6. Alago (<Benue region styles>, <Niger-Congo languages>)
7. Alamannic (Germanic, <Migration period styles>, ... Style)
8. alamedas (promenades (walkways), walkways, ... Built E)
9. Alani (<Sarmatian, <Northern Steppe early historic styles>)
10. à la poupée (<printing surface preparation techniques>, ... p)
11. <Alaskan Native styles> (<Arctic Native American styles>, <Arctic and ...>
12. almanacs (reference sources, <document genres by function>)

Possible Issues re. Unicode

• For the AAT with base language English, terms outside the Roman alphabet (e.g., Chinese terms) would be variants in results displays, so sorting of results using different alphabets/writing systems may work like this

chess
[board games (activities), <physical activity [3002222748]]
chessmen
[game pieces (game elements), table and board games [10021-18]]
pieces, chess
chess pieces
chess sets
[board games (game sets), table and board games [3002166588]]
sets, chess
chess set
Chinese chess
[board games (activities), <physical activity [300266790]]
Hsiang chi
Hsiang-ch'i
Xiangqi
How to Translate the AAT

- To contribute bulk loads to the AAT, you must include all required fields; see the XML import schema. It includes these major fields, plus flags, etc.
  
  - preferred term
  - variant terms: alternate descriptor (singular/plural) [used for terms, descriptors in other languages]
  - sources for the terms
  - scope note
  - source(s) for the scope note

- Include the subject_id of the existing AAT term
Types of Possible Matches in translating vocabularies

Exact equivalence: The most desirable match involves terms in each language that are identical, or nearly identical, in meaning and scope of usage in each language.

Inexact and partial equivalences: In cases where a suitable preferred term with the exact meaning and usage of the original term is not available in the second language, terms are sometimes linked as equivalents when they have only inexact or partial matches in scope and meaning.

Single-to-multiple term equivalence: If there is no match in scope and meaning between terms, sometimes a concept in one vocabulary is matched to multiple descriptors in the second language.

Non-equivalence: Sometimes there is no exact match, no term in the second language has partial or inexact equivalence, and there is no combination of descriptors in the second language that would approximate a match.

NOTE: Only Exact Equivalence is allowed in the AAT!!

Non-Roman alphabets or writing systems

- You must include at least one transliterated Chinese term, not only the term in Chinese characters, e.g., 漢墨 and pômô

Ideally, you will include multiple transliterated Chinese terms:

- splashed ink (preferred, C,U,U,F, American English-P)
- spilled ink (C,U,U,F, American English)
- splash ink (C,U,U,F, American English)
- pômô (splashed ink) (C,U,U,F, Chinese (transliterated Hanyu Pinyin)-P)
- pômô (splashed ink) (C,U,U,F, Chinese (transliterated Hanyu Pinyin))
- pô-mô (splashed ink) (C,U,U,F, Chinese (transliterated Wade-Giles))
- pô-mô (splashed ink) (C,U,U,F, Chinese (transliterated Wade-Giles))
How to Translate the AAT

Translate the English AAT term into Chinese as found in literary warrant. Check sources to verify term most often used in sources.

For new terms, find the English term in authoritative sources.

In the absence of an exact match between terms in different languages, fill a gap in one language with a loan term from the other language for the AAT.

A “loan term” is a foreign word or phrase that is routinely used instead of a translation of the term into the native language.

New candidate term

- bi (ceremonial objects) (Chinese (transliterated Pinyin))
- pi (Chinese (transliterated Wade-Giles))
- (Chinese (traditional))
New candidate term

- For new candidate terms, include the ID and descriptor of the proposed AAT parent
  - For new terms, choose your preferred term based on literary warrant, as described in the AAT editorial manual (standard general or scholarly sources)
  - Include a translation of the term in English
  - If an English term does not exist in English sources, do not coin a new term in English
  - Instead submit the term in the other language (transliterated) as the preferred term in the candidate record
- NOTE: For terms in a non-Roman alphabet (e.g., Greek or Chinese), transliterate into the Roman alphabet for the AAT descriptor
- Include a translation of the term in English
- If an English term does not exist in English sources, do not coin a new term in English
- Instead submit the term in the other language (transliterated) as the preferred term in the candidate record
- Scope note must be translated into English. Include sources for the Scope Note.

Include Transliterations

- We must always have the transliterated terms - for both translations of existing terms and new candidate records
- For our AAT display (with base language English), terms outside the Roman alphabet (e.g., Chinese terms) will display after terms in Roman alphabet
Include Qualifiers

- Include qualifiers for homographs.
- Inform the AAT staff when an analogous qualifier must be added to existing AAT term.
- Include qualifier for any D, AD, or UF that is a homograph in any language.

Terms: pier glasses (preferred, descriptor)
- pier glass (alternate descriptor)
- pier-glasses (used for)
- pier-glass (used for)
- glasses, pier (used for)
- mirrors, pier (used for)
- pier mirrors (used for)

trumeaux (used for) Qualifier: pier glasses
trumeau (used for) Qualifier: pier glass

Terms: trumeaux (pref, descr) Qualifier: doorway components
trumeau (used for) Qualifier: doorway component

Splashed Ink
- Pomo (splashed ink)
- 潑墨

Broken Ink
- Pomo (broken ink)
- 破墨

If characters are different, they do not require a qualifier.
- But the transliterated term may still require a qualifier.
- See Editorial Manual and consult with Vocabulary editors to construct qualifiers.
- Transliterated terms should have qualifiers in English.
- Translated terms would have qualifiers in the translated language, when appropriate, e.g., lámina (representación).
Use only bound terms

- AAT term represents a single bound concept
  - rose windows
  - onion domes
  - books of hours
  - Brewster chairs
  - prayer rugs
  - china cabinets
  - measuring cups

- Baroque cathedral is NOT a term. It comprises two terms (not bound).

Only exact equivalence, True synonyms

- Make only exact matches to AAT; terms must be exact equivalents

Chinese chess (English)
chess, Chinese (English)
Xiangqi (Chinese (transliterated Pinyin))

Xiangqi (Chinese (transliterated Pinyin))
Hsiang chi (Chinese (transliterated Wade-Giles))
Hsiang-ch’i (Chinese (transliterated Wade-Giles))
象棋 (Chinese (traditional))
Only exact equivalence, True synonyms

- Make only exact matches to AAT; terms must be exact equivalents

stirrup cups (preferred, American English-P)
stirrup cup (American English)
stirrup-cups (British English-P)
stirrup-cup (British English)
cups, stirrup (American English)
coaching glasses (American English)
hunting glasses (American English)

Steigbügelbecher (German-P)
Steigbügeltrunk (German)

No near-synonyms or generic postings

- Do NOT include near-synonyms or generic postings in a single record. Instead, make a separate record for each concept: gramophones are a type of phonograph

Terms/Names

<table>
<thead>
<tr>
<th>#</th>
<th>P</th>
<th>H</th>
<th>T</th>
<th>U</th>
<th>Terms/Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P</td>
<td>C</td>
<td>D</td>
<td>U</td>
<td>phonographs</td>
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<td>2</td>
<td>M</td>
<td>C</td>
<td>AD</td>
<td>I</td>
<td>phonograph</td>
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<tr>
<td>3</td>
<td>M</td>
<td>T</td>
<td>T</td>
<td>U</td>
<td>gramophones</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>C</td>
<td>UF</td>
<td>I</td>
<td>gramophone</td>
</tr>
</tbody>
</table>

.. audio equipment
..... phonographs
........ cylinder phonographs
.......... gramophones
.......... record players
When to make separate records rather than synonyms (UF)

- Caveat: Do not include a large number of homographs in a large number of records
- E.g., Do not make "lilac" a UF for all 28 colors to which it may correspond
- Instead, make one record for "lilac" with a SN describing its vagueness: "A range of purplish blue colors ..."
- and link it to potential corresponding colors with Associative Relationships

How to Translate the AAT into Another Language

- Licensing of the AAT and coordination with the Getty Vocabulary Program is necessary
- Use the existing structure of AAT; coordinate with AAT re. addition of new levels
- If possible, begin with existing AAT as source language and translate into the target language
- Where the target language vocabulary already exists, map existing terms to AAT
- Create new terms as needed; submit them back to the AAT for inclusion
German Compound Terms

- What to do if compound term in German is two separate concepts in English AAT?
  - No “roof by structure covered”

If possible, rather than making a loan word:
- Make two terms for German:
  - terrace + roofs
  - patio + roofs
When hierarchical structure is same in both vocabularies:
- Merge English with Spanish, etc.
- Integration is easier because Spanish AAT follows same hierarchical structure of the English AAT.

- Children of Spanish and English "portraits" must also be merged.

Use the hierarchy of the existing AAT
- Exception: If new branch of the hierarchy is required
  - E.g., German hierarchy adopted English hierarchy, one-to-one correspondence
**Comments on a few outstanding issues**
that came up at the Multilingual Terminology Working Group meeting 25 August 2010

- **Additional issues:**
  - Finding 3 pieces of warrant and using online sources
  - How to record different regional term uses within the same basic language
**Question:** How can I find three pieces of warrant for terms? May I use online sources?

**Answer:** While authoritative printed sources are generally consulted first, online sources may be used provided that they are authoritative.

Do not use Wikipedia as a source; however, you may find authoritative sources for a concept through the footnotes in Wikipedia articles.

Appropriate online sources include the following: Web sites of a repository (museums, archives, special collections in libraries, image collections); encyclopedia, dictionaries, university sites, library catalogs, online books and articles, etc.

Avoid dot-com sites; however, the dot-com sites of major auction houses and galleries may be used.

Sources are discussed in the Editorial Guidelines. We will add further instruction in these guidelines regarding online sources:

http://www.getty.edu/research/conducting_research/vocabularies/guidelines/aat_3_3_terms_names.html#3_3_15

Four sources for this term are the following:

1. Library of Congress publication. Page field may contain page or other context information; here it notes the heading as it appears in the source
3. Personal communication, with name, date, and affiliation of the person in the page field
4. The database of a contributor of the name

<table>
<thead>
<tr>
<th>Term Source(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDMARC Subjects: LCSH (1988-)</td>
<td>Chewa (African people)</td>
</tr>
<tr>
<td>Murdock, Africa (1959)</td>
<td>433</td>
</tr>
<tr>
<td>Personal Communication</td>
<td>Janet Stanley, Librarian, National Museum of African Art, 20 April 1989</td>
</tr>
<tr>
<td>TAA database (2000-)</td>
<td></td>
</tr>
</tbody>
</table>
Online dictionary may provide warrant

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Chewa, n. and adj.

**A. n.**

1. A member of an African people inhabiting central Malawi and adjoining areas of Zambia and Mozambique.

---

**B. adj.**

Of or relating to the Chewa or their language. Cf. [Chichewa](#).

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Online encyclopedia

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**Chewa**

Encyclopaedia Britannica

Bantu-speaking people living in the extreme eastern zone of Zambia, northwestern Zimbabwe, Malawi, and Mozambique. They share many cultural features with their Bemba kinmen to the west. Their language, **Chewa**, is also called **Chichewa**, **Nyanja**, or **Chinyanja** and is important in Malawi.

The economy rests primarily on swidden (slash-and-burn) agriculture, major crops being cassava (yam) and millet.
Unpublished warrant may include the following:

1. Name of the contributing project itself may be warrant
2. Reference to editorial guidelines may be warrant (e.g., if source lists singular, but descriptor must be plural, so editor creates the plural – ONLY IF the editor is expert in that language)
3. Personal communication with a scholar or other authority

CCA Authority File (1980-)
Getty Vocabulary Program rules
Personal Communication
Example of a term requiring additional warrant for the descriptor

- One source is a printed book; you may use online sources to provide full warrant
- All three sources may be online, provided they are authoritative

Warrant for “factory mark” is found in online encyclopedia, as alternate term

- Will need to add entry-form “potter’s mark” as a variant term in AAT (if indeed it is a true synonym, which it may not be, based on discussion in Encyc Brit)
- This would be a source for “factory mark” in any case
- Or perhaps change descriptor to “potter’s mark,” if warrant dictates
- However, avoid changing hierarchical positions and descriptors if possible, because it inconveniences users who copy-and-paste rather than linking to updatable AAT files
You may find warrant in online articles, such as BHA citations or Google Scholar.

![Google Scholar](image)

**Old Dutchware: trameuse production at Delft**  
*van Duyvenbode, 1980 - Rizzoli*  
Cited by 3 - Related articles

**Conceptualizing control: domination and hegemony in the capitalist labor process**  
*Herman - Contemporary Sociology, 1982*  
Cited by 22 - Related articles - Check the local catalog

**Marks of American potters**  
*G. Baxter - 1904 - Google Books*  
Page 47: MARKS OF AMERICAN POTTERS - In addition to these factory marks, there were usually ETRUSCAN MAOLICA other marks impressed in the wares and as these are occasionally found alone they are given here to facilitate identification of the Phoenician products.  
Cited by 19 - Related articles

**Andalusian ceramics in Spain and New Spain: a cultural register from the third century BC to 1700**  
*PDF* Remarks on the method of art history: II  
*F. Antal - The Burlington Magazine, 1949 - JSTOR*  
...the bottom of the fence over which a man's head appears, can just be discerned, the additional inscription 'Robert, sculptor'. If this refers to the designer (as seems likely) then this piece has the additional distinction of bearing the artist's name, as well as the factory mark and date.  
Cited by 2 - Related articles

You may find warrant in titles in library catalogs. If the term is in the title, you need not access the entire article or book.

![Library Catalog](image)

The Library Catalog will be unavailable, due to scheduled maintenance, from Sept. 6 at 5pm, until September 9 at 5pm.  
The Research Library will be closed Sept. 7-9 in order to perform necessary inventory and maintenance projects.

Select a Quick Limit (optional):
- None
- Exclude auction catalogs
- Auction catalog only
- Special collections only
- Photo Study Collection only
- English only
Listings by online booksellers may be used as warrant, if the term is in the title or if a partial excerpt contains the term.

Excerpt – page 44: "...Moreover, the factory marks on Nyonya ware favour a Jingdezhen provenance, at least ..."

• Prominent online auctions may be used for warrant
• Auction houses and large galleries may also have glossaries that may be used as warrant

hand-painted porcelain, printed factory marks, impressed date ...
**Question:** How can I indicate that a concept is represented by different terms or a term is used differently in two different nations or regions, but both nations or regions speak basically the same language? Examples would be a Spanish term in Chile vs. a term in Spain, or a Dutch term in the Netherlands vs. a term in Flanders.

**Answer:** We can use a model similar to that already established for our Taiwanese colleagues' Chinese translation, and earlier, for the differences between American and British English. In this solution, values are added to the language tables in the AAT to represent regional language differences.

For example, with English terms, if the same term is used in both British and American English, the language designator “English” is used.
But if the spelling differs between British and American English, the terms (descriptor, AD, UFs) for each language variation are distinguished.

This illustrates the language list from AAT of languages related to English.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>70026</td>
<td>Middle English</td>
</tr>
<tr>
<td>70051</td>
<td>English</td>
</tr>
<tr>
<td>70052</td>
<td>American English</td>
</tr>
<tr>
<td>70053</td>
<td>British English</td>
</tr>
<tr>
<td>70054</td>
<td>Irish Gaelic</td>
</tr>
<tr>
<td>70055</td>
<td>Scots Gaelic</td>
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<tr>
<td>70058</td>
<td>Welsh</td>
</tr>
<tr>
<td>70057</td>
<td>Celtic language</td>
</tr>
<tr>
<td>70058</td>
<td>Celtic-Gallic dialect</td>
</tr>
<tr>
<td>70059</td>
<td>Insular language</td>
</tr>
</tbody>
</table>
Languages designations for Chinese, including transcription indicator. If the distinction is not known, then using “72550 / Chinese” is fine.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>72550</td>
<td>Chinese</td>
</tr>
<tr>
<td>72551</td>
<td>Chinese (traditional)</td>
</tr>
<tr>
<td>72552</td>
<td>Chinese (simplified)</td>
</tr>
<tr>
<td>72553</td>
<td>Chinese (Zhuoyin transcription)</td>
</tr>
<tr>
<td>72551</td>
<td>Chinese, Gan</td>
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<tr>
<td>72562</td>
<td>Chinese, Hakka</td>
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<td>72563</td>
<td>Chinese, Huizhou</td>
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<td>72564</td>
<td>Chinese, Jinyu</td>
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<tr>
<td>72565</td>
<td>Chinese, Mandarin</td>
</tr>
<tr>
<td>72568</td>
<td>Chinese, Min Bei</td>
</tr>
<tr>
<td>72567</td>
<td>Chinese, Min Dong</td>
</tr>
<tr>
<td>72568</td>
<td>Chinese, Min Nan</td>
</tr>
</tbody>
</table>

To resolve the issue noted for Spanish variations, these two language designations will be added. If the term is the same in various dialects of Spanish, or if a difference is not known, then simply “Spanish” may be used. If differences are known, the more specific language designation may be used.

Add “Spanish, Chile” “Spanish, Spain”
For Dutch, there is already an entry for “Flemish”; first Vocab needs to verify that “Flemish” means “Dutch, Flanders”; then can change that term, and add “Dutch, the Netherlands”

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>70251</td>
<td>Dutch</td>
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<tr>
<td>70252</td>
<td>Flemish</td>
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<tr>
<td>70253</td>
<td>Afrikaans</td>
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<td>70256</td>
<td>Extremaduran</td>
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<td>70256</td>
<td>Fala</td>
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<td>70271</td>
<td>French</td>
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<td>70272</td>
<td>Limousin</td>
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<td>Provençal</td>
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<td>Languedocien</td>
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<td>70275</td>
<td>Norman-French</td>
</tr>
<tr>
<td>70276</td>
<td>Luxembourgeois</td>
</tr>
<tr>
<td>70277</td>
<td>Frankish</td>
</tr>
</tbody>
</table>

Add these?
“Dutch, the Netherlands”
“Dutch, Flanders”