

Using KOS as the Connectors of Linked Datasets

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Outline

1. AGROVOC Thesaurus

-- Backbone of linked datasets in the agricultural domain

2. Creating LOD Microthesauri

-- using LOD Art and Architecture Thesaurus (AAT) as an example



AGROVOC

Backbone of linked datasets in the agricultural domain

What is AGROVOC?

Controlled vocabulary covering all areas of interest of the Food and Agriculture Organization (FAO) of the United Nations, including food, nutrition, agriculture, fisheries, forestry, environment etc.



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AGROVOC
AGROVOC Multilingual agricultural thesaurus

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Latest AGROVOC release: July 2014

AGROVOC is a controlled vocabulary covering all areas of interest of the Food and Agriculture Organization (FAO) of the United Nations, including food, nutrition, agriculture, fisheries, forestry, environment etc. It is published by FAO and edited by a community of experts.

AGROVOC consists of over 32,000 concepts available in 21 languages: Arabic, Chinese, Czech, English, French, German, Hindi, Hungarian, Italian, Japanese, Korean, Lao, Persian, Polish, Portuguese, Russian, Slovak, Spanish, Thai, Turkish and Ukrainian.

AGROVOC is used by researchers, librarians and information managers for indexing, retrieving and organizing data in agricultural information systems and Web pages. Currently AGROVOC is an SKOS-XL concept scheme and a Linked Open Data set aligned with 13 other multilingual knowledge organization systems related to agriculture.

You may download AGROVOC, access its Web Services or access its SPARQL endpoint.

AGROVOC is edited through [VocBench](#), an open-source, Web-based, collaborative editing tool for multilingual thesauri and RDF-SKOS resources.



Register and subscribe to receive e-mail updates

TYPE
Thesaurus

CONTACT EMAIL
agrovoc@fao.org

CREATION DATE
22 Sep 2008

SUPPORTED LANGUAGE(S)
Arabic, Chinese, Czech, English, French, German, Hindi, Hungarian, Italian, Japanese, Korean, Lao, Persian, Polish, Portuguese, Russian, Slovak, Spanish, Thai, Turkish, Ukrainian

Technical Aspects

- AGROVOC RDF/SKOS (SKOS-XL)
 - for download
 - “live” through SPARQL endpoint and web services
- LOD: linked to 13 vocabularies
- Total number of concepts = ~ 32,000
 - 20 languages published
 - 4 under development
 - 25 top concepts
 - Maximum depth hierarchy: 14

Strengths of AGROVOC

- Multilinguality
- Number of (institutional) users
- Experience and work done towards use in open data environment



AGROVOC

Structure

Alphabetical

Hierarchy

Group index

- Fat products
- feeds
- Fishery products
- foods
- Forest products
- Fresh products
- New products
- Non food products
- oil products
- Plant products
 - Cellulose products
 - Cereals
 - Barley
 - Coarse grains
 - Feed cereals
 - maize
 - Millet
 - oats
 - Rice**
 - Basmati rice
 - Broken rice
 - Rye
 - Sorghum grain
 - Triticale (product)
 - Wheats
 - cocoa products
 - Coconut water
 - Coffee beans
 - Cut flowers
 - Cut foliage
 - Fruits
 - Grain
 - Legumes
 - Nuts
 - oilseeds
 - Opium
 - Pseudocereals
 - Pulp
 - Spices
 - Stimulants
 - Sugarbeet
 - Sugarbeet juice
 - Sugarcane
 - Tanning agents
 - Vegetables
- Processed products
- Resins
- Stored products

products > Plant products > Cereals > Rice

PREFERRED TERM

Rice

CONCEPT TYPE

Concept

BROADER CONCEPT

Cereals

NARROWER CONCEPTS

Basmati rice

Broken rice

ALTERNATIVE LABEL

Paddy

IN OTHER LANGUAGES

ryža (sk)

चावल (hi)

Riz (fr)

ryža siata (sk, replaced)

hántolatlan rizs (hu, replaced)

çeltik (tr, replaced)

Ryż niełuszczone (pl, replaced)

Ryż brunatny (ziarno) (pl, replaced)

水稻 (zh, replaced)

Riz paddy (fr, replaced)

धान (hi, replaced)

Arroz paddy (pt, replaced)

Beras (ms, replaced)

необрушенный рис (ru, replaced)

ryže setá (cs, replaced)

Risone (it, replaced)

ข้าวเปลือก (th, replaced)

URI

http://aims.fao.org/aos/agrovoc/c_6599

Download this concept:

[RDF/XML TURTLE](#)

CLOSELY MATCHING

Arroz (es)

CONCEPT

EXACT MATCH

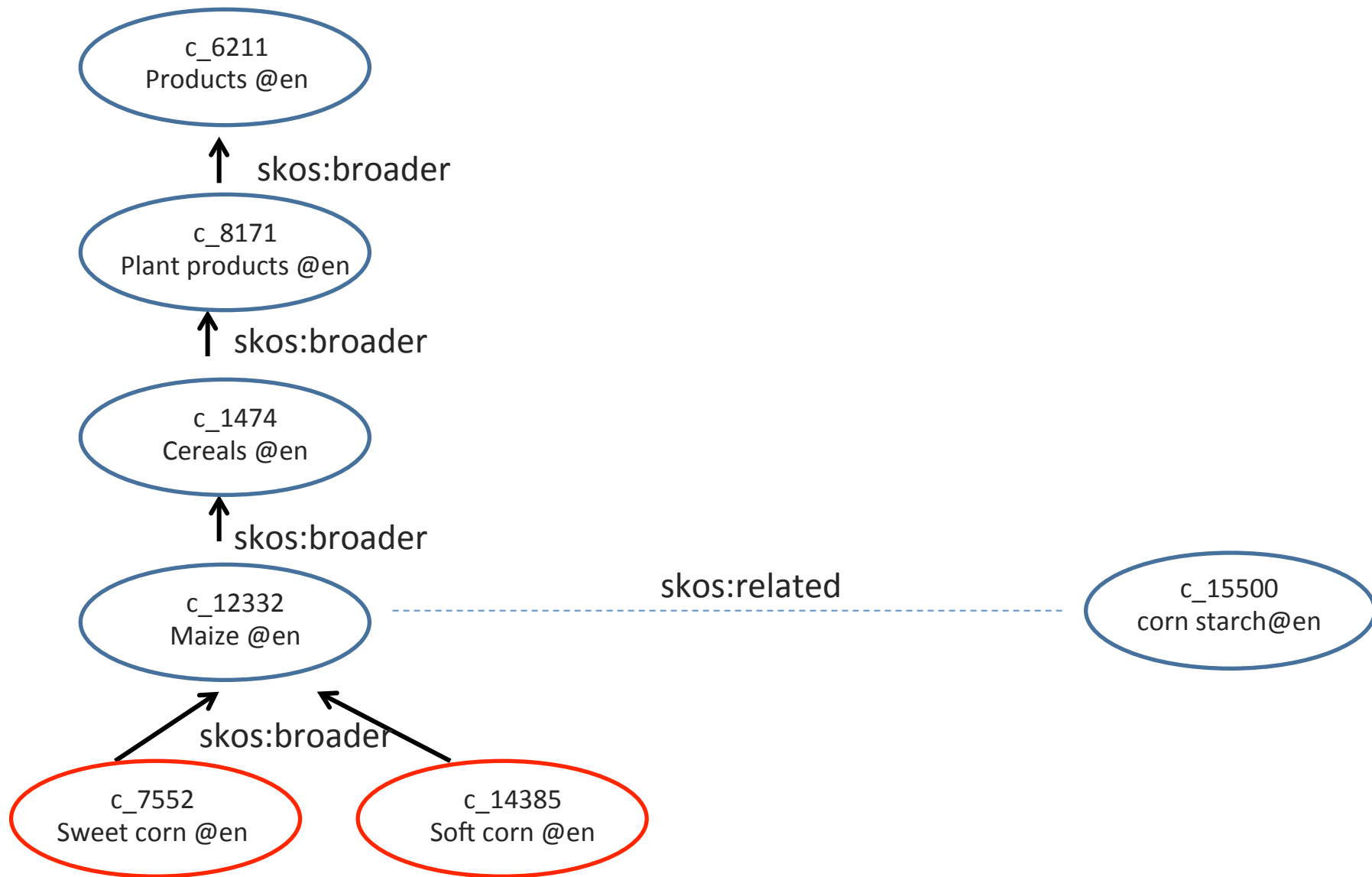
Reis (de)

STW
Thesaurus
for
Economics<http://d-nb.info/gnd/4049271-0><http://eurovoc.europa.eu/3732><http://id.loc.gov/authorities/sh85113862#concept><http://lod.nal.usda.gov/nalt/56293>

BT/NT

Labels in different
languages

Interlinking



Use case of Linked Data KOS (AGROVOC) in information services (AGRIS)

AGRIS

International System for Agricultural Science and
Technology

AGRIS - Background

- **A network:** AGRIS is collaborative network of more than 150 institutions from 65 countries
- **A database:** AGRIS is a multilingual bibliographic database for agricultural science
- **A Web portal:** AGRIS (<http://agris.fao.org/>) is a Web application that links the AGRIS knowledge to related Web resources using the Linked Open Data methodology
 - Purpose: providing as much information as possible about a topic within the agricultural domain

The setting

- Bibliographic references in the agricultural domain enhanced by the AGROVOC thesaurus
- AGRIS is an RDF-aware system, a mashup application that allows users to query the AGRIS content, interlinking all resources to external sources of information

Some statistics of AGRIS



- ~ 300.000 visits/month
- World wide used (accessed from more than 200 countries)

Interlinking

- Centralization: bibliographic references in the AGRIS domain (agriculture, forestry, animal husbandry, aquatic sciences and fisheries, and human nutrition)
- **Interlinking:** other kinds of information related to the AGRIS domain (statistics, germplasm data, maps, country profiles, etc.)

7.7 million bibliographic references
become 7.7 million mashup pages!

AGROVOC as the backbone

- AGROVOC is the backbone, the magic that allows the interlinking to external datasets
- Two ways to implement the interlinking:
 - Using AGROVOC formal alignments to other thesauri (skos:exactMatch, skos:closeMatch)
 - Querying external WebServices with scientific names, extracted from AGROVOC (no RDF, simply Java programming)



Food and Agriculture Organization
of the United Nations

English Español Français العربية 中文 Русский

AGRIS Find resources...

normal
bibliographic
data

Search Results (Get Classical View)

Query: bigeye tuna 

Results 1 - 10 of 4,562

Study on size, sex ratio and length-weight relationship of yellowfin tuna (*Thunnus albacares*) and bigeye tuna (*T. obesus*) in the Eastern Indian ocean

Pattira Lirdwitayaprasit; Weera Pokapant

Study on size, sex ratio and length-weight relationship of yellowfin tuna (*T. albacares*) and bigeye tuna (*T. obesus*) in the Eastern Indian Ocean was made from January-May 1987-1991. The samples were caught by the FRTV CHULABHORN and Fishery Research Vesse; NO.4 with the employment of tuna longline. There were 362 specimens of yellowfin tuna and 62 of bigeye tuna with fork length about 78.0-164.0 cm, and 72.0-148.0 cm, respectively. Sex ratios of yellowfin tuna and bigeye tuna for male and femal ...

Primary structure and thermostability of bigeye tuna [*Thunnus obesus*] myoglobin in relation to those of other scombridae fish

Ueki, N. ; Ochiai, Y.

In the present study, the cDNA encoding myoglobin (Mb) of bigeye tuna *Thunnus obesus* was cloned and its amino acid sequence deduced in, order to investigate the relationship between the primary structure and thermostability of scombridae fish Mb. An open reading frame of bigeye tuna Mb cDNA contained 444 nucleotides encoding 147 amino acids. The primary structure of bigeye tuna Mb was highlv conserved when compared with those of bluefin tuna and yellowfin tuna Mb. the sequence identity beina 95. ...

▼ Refine your search

Sort by:

☒ Relevance ☐ Submission Date

Order:

☐ Ascending ☒ Descending

Change order

Up to 10 AGROVOC descriptors most used
▼ in this result set. Click on keywords to
refine your search.

- tuna (1343)
- thunnus (371)
- fishery data (287)
- fishery resources (286)
- yields (209)
- indian ocean (200)
- line fishing (159)
- thon (152)
- fishery management (137)
- fishing methods (134)

▼ Content types in this result set. Click on
keywords to refine your search.

- Bibliography
- Book
- Conference

<http://agris.fao.org/agris-search/searchIndex.do?query=bigeye+tuna&x=0&y=0>

search results for "bigeye tuna"

normal
bibliographic
data

Length-frequency compositions and weight-length relations for bigeye tuna, yellowfin tuna, and albacore (Perciformes: Scombrinae) in the Atlantic, Indian, and eastern Pacific oceans

RDF lod:live

Zhou, Y.
Zhu, G.
Dai, X., Tuna Fishery Technical Working Group of China, Shanghai, China
Xu, L., Shanghai Ocean University, Shanghai (China). College of Marine Sciences

Abstract:

Bigeye tuna, *Thunnus obesus* (Lowe, 1839), yellowfin tuna, *Thunnus albacares* (Bonnaterre, 1788), and albacore, *Thunnus alalunga* (Bonnaterre, 1788), are very important species for world fisheries. The weight-length relations (WLRs) of the three species were studied using commonly accepted methodology. Significant differences can be found from the fork length distributions and the WLRs of the above 3 tuna species and the relations of gilled-gutted and whole weight of bigeye and yellowfin tunas collected from the Atlantic, Indian, and Eastern Pacific Oceans. Significant differences of fork length distributions can be found for bigeye tuna, yellowfin tuna, and albacore from the three areas. The data collected will be useful for the fisheries management of the three species studied

Read the article: <http://www.aiep.pl/>

AGRIS started to run, generating the bibliographic information and other linked information on the fly...

<http://agris.fao.org/openagris/search.do?recordID=PL2009000495>

Using AGROVOC to Link with Resources

Length-frequency compositions and weight-length relations for bigeye tuna, yellowfin tuna, and albacore (Perciformes: Scombrinae) in the Atlantic, Indian, and eastern Pacific oceans

Zhou, Y.
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Dai, X., Tuna Fishery Technical Working Group of China, Shanghai, China
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Read the article: <http://www.aiep.pl/>

▼ Agrovoc Keywords

- *Thunnus obesus*
- fishery data
- Tuna
- Animal developmental stages
- body weight
- statistical data
- Animal physiology
- Fishery production
- *Thunnus*
- *Thunnus alalunga*
- Fishery management
- Pacific Ocean
- Animal growth forms

▼ Acta Ichthyologica et Piscatoria (Journal)

FREQUENCY: Semiannual (2 numbers a year)
START DATE: 1972

▼ Source:

Centralna Biblioteka Rolnicza/Central Agricultural Library

CBR is a scientific library subordinated to the Ministry of Agriculture and Rural Development. It has branch in ...

Powered by Google™
Read the article and/or related articles:

▼ Length-frequency compositions and weight-length relations for ...

Dec 1, 2008 ... **yellowfin tuna**, and **albacore (Perciformes: Scombrinae)** in the **Atlantic, Indian**, ... The **weight-length relations (WLRs)** for **bigeye tuna**, **yellowfin tuna**, and **albacore**, collected in the **Atlantic, Indian**, and **eastern Pacific oceans** were studied ... tuna, and **albacore** collected from the **Atlantic, Indian**, and **eastern ...**

Go to the page

► [PDF] Guoping ZHU 1, 2, 3, Liuxiong XU 1, 2 *, Yingqi ZHOU 1, 2, and ...

► Table S1.

► Regional patterns in mercury and selenium concentrations of ...

Data from www.nature.com

► Climatology: Extremes in the Indian Ocean

► Marine biogeochemistry: The ups and downs of ocean oxygen

► Earth science: Subtle minds and mid-ocean ridges

► Ocean-atmosphere coupling: Mesoscale eddy effects

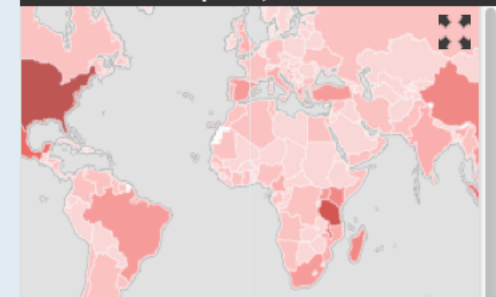
Data from DBpedia:

► Body weight

► Atlantic ocean

Data from World Bank (double-click an area to zoom)

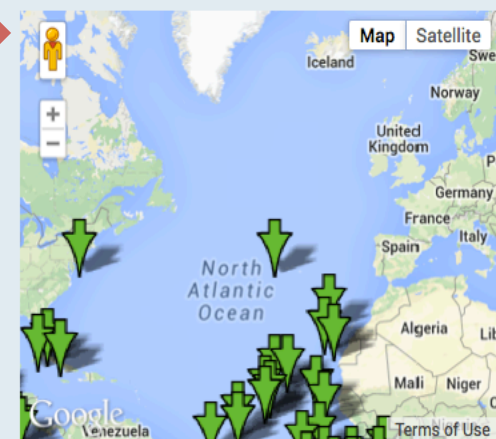
Fish species, threatened



Fish species, threatened

1 236

Thunnus obesus distribution map. Data from Global Biodiversity Information Facility (GBIF)



<http://agris.fao.org/openagris/search.do?recordID=PL2009000495>

The RDF presentation of the bibliographic reference

Length-frequency compositions and weight-length relations for bigeye tuna, yellowfin tuna, and albacore (Perciformes: Scombrinae) in the Atlantic, Indian, and eastern Pacific oceans

at AGRIS RECORDS

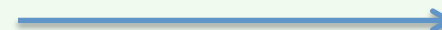


<http://agris.fao.org/aos/records/PL2009000495>

RDF triples for the same bibliographic reference (machine-generated, human-readable).

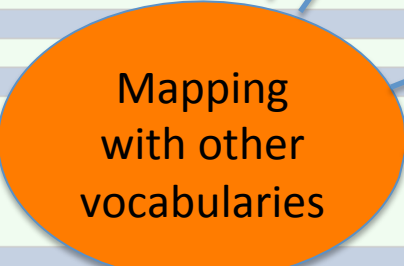
Property	Value
abstract	■ Bigeye tuna, <i>Thunnus obesus</i> (Lowe, 1839), yellowfin tuna, <i>Thunnus albacares</i> (Bonnaterre, 1788), and albacore, <i>Thunnus alalunga</i> (Bonnaterre, 1788), are ... »more» (eng)
creator	■ [8 anonymous resources]
dateSubmitted	■ 2009
description	■ 2 fig., 2 tables ■ 22 ref. ■ Summary (En)
identifier	■ PL2009000495
isPartOf	■ < file:///home/fao/transfer/agris/RDF_Output/2009/http%3A%2F%2Faims.fao.org/aos/agrovoc/c_133547 > ■ < file:///home/fao/transfer/agris/http%3A%2F%2Faims.fao.org%2Fserials%2F2009/PL2009000495 >
issued	■ 2008
language	■ eng
source	■ < http://ring.ciard.net/node/10592 >
subject	■ < http://aims.fao.org/aos/agrovoc/c_15846 > ■ < http://aims.fao.org/aos/agrovoc/c_24026 > ■ < http://aims.fao.org/aos/agrovoc/c_25187 > ■ < http://aims.fao.org/aos/agrovoc/c_2940 > ■ < http://aims.fao.org/aos/agrovoc/c_30788 >

subjects are represented by the concept IDs (URIs)



http://aims.fao.org/aos/agrovoc/c_2593

Property	Value
void:inDataset	http://aims.fao.org/aos/agrovoc/void.ttl#Agrovoc
http://art.uniroma2.it/ontologies/vocbench#hasStatus	Published
dcterms:modified	2014-07-03T19:17:01Z
http://aims.fao.org/aos/agrontology#influences	http://aims.fao.org/aos/agrovoc/c_23988 http://aims.fao.org/aos/agrovoc/c_36263 http://aims.fao.org/aos/agrovoc/c_4802 http://aims.fao.org/aos/agrovoc/c_23990 http://aims.fao.org/aos/agrovoc/c_33483
http://www.w3.org/2004/02/skos/mapping#exactMatch	http://aims.fao.org/aos/asfa/c_5599
skos:inScheme	http://aims.fao.org/aos/agrovoc
skos:broadMatch	http://www.caas.net.cn/caas/cat/c_40002 http://www.caas.net.cn/caas/cat/c_19629 http://www.caas.net.cn/caas/cat/c_19623 http://www.caas.net.cn/caas/cat/c_19627 http://www.caas.net.cn/caas/cat/c_40490 http://www.caas.net.cn/caas/cat/c_19577 http://www.caas.net.cn/caas/cat/c_19573 http://www.caas.net.cn/caas/cat/c_19576 http://www.caas.net.cn/caas/cat/c_19567 http://www.caas.net.cn/caas/cat/c_19560 http://www.caas.net.cn/caas/cat/c_19619 http://www.caas.net.cn/caas/cat/c_9096 http://www.caas.net.cn/caas/cat/c_19557 http://www.caas.net.cn/caas/cat/c_55260 http://www.caas.net.cn/caas/cat/c_19587 http://www.caas.net.cn/caas/cat/c_19581 http://www.caas.net.cn/caas/cat/c_19586 http://www.caas.net.cn/caas/cat/c_19608
skos:narrower	http://aims.fao.org/aos/agrovoc/c_331336 http://aims.fao.org/aos/agrovoc/c_26824 http://aims.fao.org/aos/agrovoc/c_35294 http://aims.fao.org/aos/agrovoc/c_554 http://aims.fao.org/aos/agrovoc/c_24949 http://aims.fao.org/aos/agrovoc/c_24950
skos:broader	http://aims.fao.org/aos/agrovoc/c_330892
rdf:type	skos:Concept
skos:closeMatch	http://dbpedia.org/resource/Environment
dcterms:created	2012-02-03T16:31:26Z
skos:exactMatch	http://lod.nal.usda.gov/nalt/26877 http://zbw.eu/stw/descriptor/15759-6 http://d-nb.info/gnd/4061616-2 http://www.eionet.europa.eu/gemet/concept/2944 http://linkeddata.ge.imati.cn.it:2020/resource/EARTh/20200 http://www.caas.net.cn/caas/cat/c_19548



Type	Label	Lang
skosxl:prefLabel	környezet	hu
skosxl:prefLabel	环境	zh
skosxl:prefLabel	محيط زیست	fa
skosxl:prefLabel	بيئة	ar
skosxl:prefLabel	Środowisko	pl
skosxl:prefLabel	Medio ambiente	es
skosxl:prefLabel	ສະພາບແວດລ້ອມ	lo
skosxl:prefLabel	환경	ko
skosxl:prefLabel	ສະພາບແວດລ້ອມ	te
skosxl:prefLabel	สภาพแวดล้อม	th
skosxl:prefLabel	Ambiente	it
skosxl:prefLabel	environment	en
skosxl:prefLabel	UMWELT	de
skosxl:prefLabel	環境	ja
skosxl:prefLabel	навколишнє середовище	uk
skosxl:prefLabel	Environnement	fr
skosxl:prefLabel	окружающая среда	ru
skosxl:prefLabel	पर्यावरण	hi
skosxl:prefLabel	životné prostredie	sk
skosxl:prefLabel	životní prostředí	cs
skosxl:prefLabel	Ambiente	pt
skosxl:prefLabel	ortam	tr
skosxl:altLabel	ekologická zonácia	sk
skosxl:altLabel	Zonazione ecologica	it
skosxl:altLabel	ekologická pásma	cs
skosxl:altLabel	Ecological zones	en
skosxl:altLabel	पारिस्थितिक मण्डल	hi
skosxl:altLabel	Zone écologique	fr
skosxl:altLabel	உயிர்வாழ்வு மண்டலம்	te
skosxl:altLabel	Strefowość ekologiczna	pl
skosxl:altLabel	Zonation écologique	fr
skosxl:altLabel	OEOLOGISCHE ZONIERUNG	de
skosxl:altLabel	生态区	zh
skosxl:altLabel	दोषकलप	uk
skosxl:altLabel	Ecological zonation	en
skosxl:altLabel	Ambiente	es
skosxl:altLabel	생태지대	ko
skosxl:altLabel	การแบ่งเขตทางนิเวศวิทยา	th
skosxl:altLabel	Milieu naturel	fr

AGROVOC is mapped to
10+ important KOS

Resource	Topics	Linked concepts	Languages	Linked Data	Type of link
FAO Biotechnology Glossary	Biotechnologies	810	EN, ES, FR, +3 more	Yes	skos:closeMatch
EUROVOC	General EU	1 297	EN, ES, FR + 21 more	Yes	skos:exactMatch
GEMET	Environment	1 191	EN, ES, FR + 30 more	Yes	skos:exactMatch
Library of Congress Subject Headings (LCSH)	General	1 093	EN	Yes	skos:exactMatch
NAL Thesaurus	Agriculture	13 390	EN, ES	Yes	skos:exactMatch
RAMEAU Répertoire d'autorité-matière encyclopedique et alphabetique unifie	General	686	FR	Yes	skos:exactMatch
STW - Thesaurus for Economics	Economy	1 136	EN, DE	Yes	skos:exactMatch
TheSoz - Thesaurus for the Social Sciences	Social sciences	846	EN, DE	Yes	skos:exactMatch
Geopolical Ontology	Geopolitical entities	253	AR, CH, EN, ES, FR, RU	Yes	skos:exactMatch
Dewey Decimal Classification (DDC)	General	409	EN, ES, FR + 8 more	Yes	skos:exactMatch
DBpedia	General	10 989	EN, ES, FR + 8 more	Yes	skos:exactMatch skos:closeMatch
SWD (Schlagwortnormdatei)	General	6 245	DE	Yes	skos:exactMatch skos:closeMatch skos:broadMatch skos:narrowMatch
GeoNames	Geographical entities	212	EN, ES, FR + 63 more	Yes	skos:exactMatch

<http://aims.fao.org/standards/agrovoc/linked-open-data>,
accessed 2014-10-24

<bibo:Article rdf:about="http://agris.fao.org/aos/records/XS2010X00001">
<dc:identifier>XS2010X00001</dc:identifier>
<dc:title xml:lang="pt">Características anatómicas ...</dc:title>
<dc:title xml:lang="en">...</dc:title>
<dc:creator>
<foaf:Person><foaf:name>Mesquita, Alessandro Carlos</foaf:name></foaf:Person>
</dc:creator>
<dc:publisher>
<foaf:Organization><foaf:name>Instituto Nacional de ...</foaf:name></foaf:Organization>
</dc:publisher>
<dc:issued>2010</dc:issued>
<dc:subject rdf:resource="http://aims.fao.org/aos/agrovoc/c_6200"/>
<bibo:abstract xml:lang="pt"><![CDATA[As estruturas envolvidas na produção ...]]></bibo:abstract>
<bibo:abstract xml:lang="en"><![CDATA[The structures involved in latex production ...]]></bibo:abstract>
<bibo:uri><![CDATA[http://www.scielo.br/scielo.php?pid=...]]></bibo:uri>
<bibo:language>por</bibo:language>
<dc:isPartOf rdf:resource="http://aims.fao.org/serials/c_e08016a8"/>
</bibo:Article>

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Read the article and/or related articles:

▼ Length-frequency compositions and weightlength relations for ...

Dec 1, 2008 ... **Length-frequency compositions and weightlength relations for bigeye tuna, yellowfin tuna, and (Perciformes: Sciaenidae)**

Data from [Europeana](#) 

▼ Rice irrigation in Texas...

Taylor, Thomas Ulvan

[\[PDF\] Guoping ZHANG, Ichthyologic](#)

[Language](#)

[Data](#)

[Lear](#)

▼ **Acta Ichthyologica et Piscatoria (Journal)**

FREQUENCY: Semiannual (2 numbers a year)

START DATE: 1972

▼ **Agris articles from the same journal:**

- Interaction of gonadotropin-releasing hormone (LH) and follicle-stimulating hormone (FSH) in common carp, *Cyprinus carpio*.

▼ **Source:**

Centralna Biblioteka Rolnicza/Central
Agricultural Library

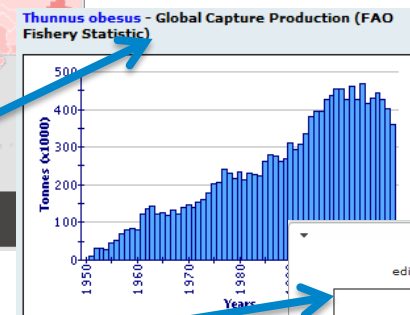
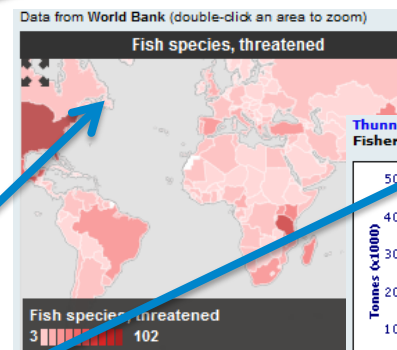
CBR is a scientific library subordinated to the Ministry of Agriculture and Rural Development. It has branches in Belarus. CBR collections - thematically Data from www.naturalsciences.org

HOMEPAGE: [http://www.
/eng/index.php](http://www.eng/index.php)

▼ Climatology: Extremes in the Indian Ocean

David Anderson [1999-09-23]

In contrast to the Atlantic and Pacific Oceans, the Indian Ocean has seemed to manifest little coherent behaviour in the variability of such parameters as water temperature and rainfall. Now, however, two studies identify a so-called dipole mode in which the distribution of ocean temperature can be related to rainfall patterns in east Africa and In...

[illegible]

the Republic of Turkey



POPULATION TOTAL (2010): 72 752 000
[SOURCE]

Gross domestic product

GDP TOTAL (2009): 614 603 (millions of US dollars) [SOURCE]

Human Development Index
(0 - 1 / low - high)

HDI TOTAL (2010): 0.679 (Calculated)
[SOURCE]

FROM: FAO Country Profiles

A screenshot of a Wikipedia article titled "Tuna". The title is at the top in a large, bold, black font. Below the title is the text "edit wikipedia" followed by a small "W" logo. A large blue arrow points from the left edge of the page towards the word "Tuna". Below the title and edit link is a rectangular image of a tuna fish, shown from the side, facing left. The fish has a silver body with a yellowish-gold stripe running along its side. Below the image is a paragraph of text describing tuna as salt water fish from the family Scombridae, mentioning their speed and muscle tissue color.

Create Linked Open Data (LOD) Microthesauri using *Art & Architecture Thesaurus* (AAT) LOD



www.slideshare.net/mzeng/aat-microthesauri

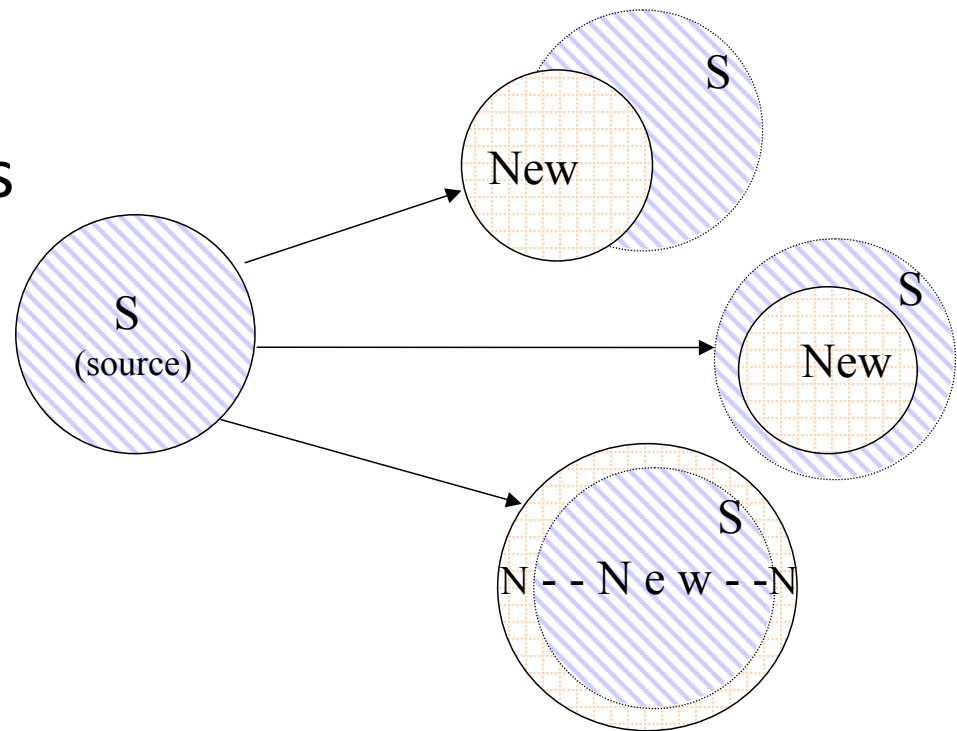
1. Definition

Microthesaurus: designated subset of a thesaurus that is capable of functioning as a complete thesaurus.

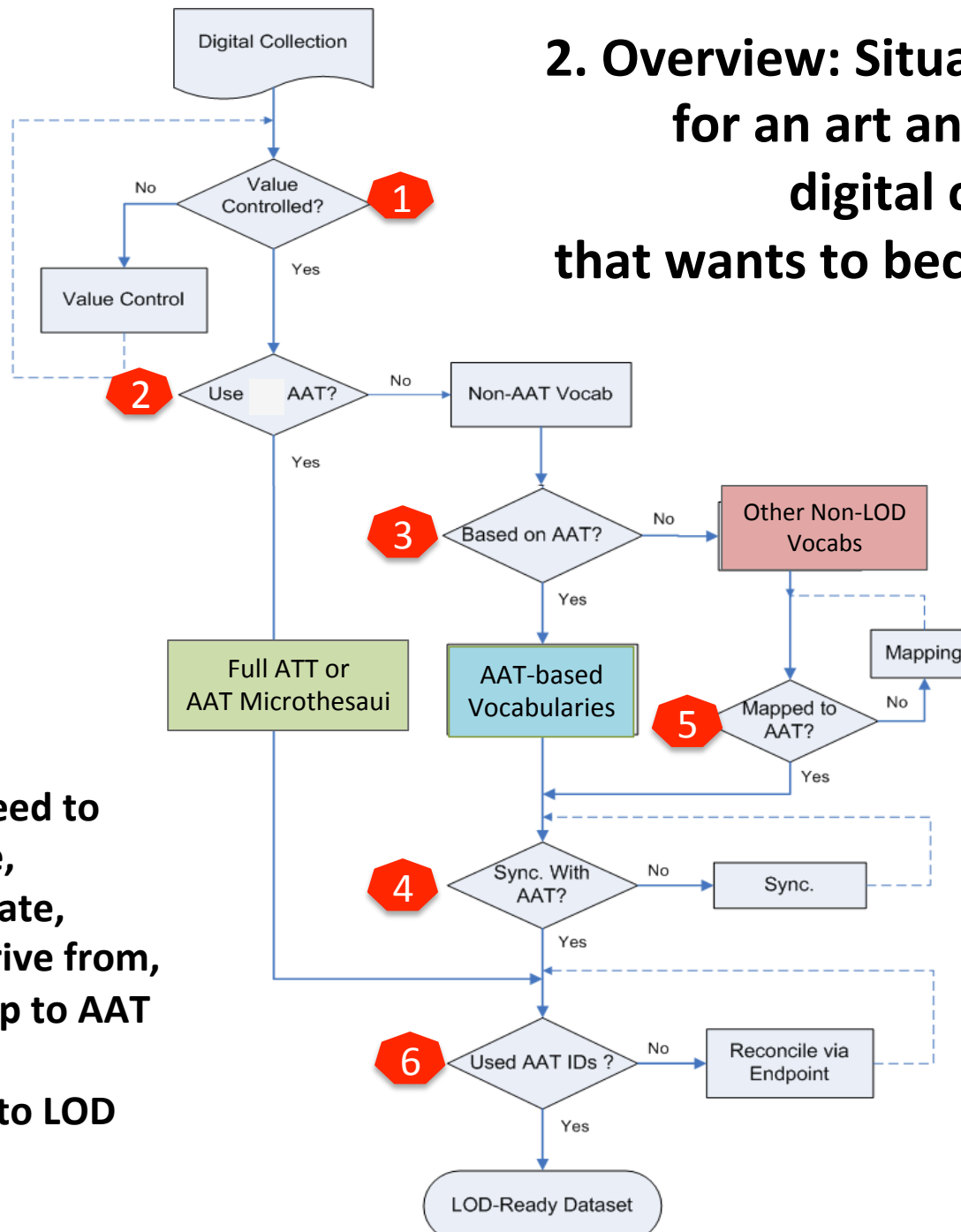
-- ISO25964-2:2013

Microthesauri are different from:

- Derived vocabularies
 - adaptation
 - modification
 - expansion
 - partial adaptation
 - translation



2. Overview: Situations and decisions for an art and architecture digital collection that wants to become a LOD dataset



The need to

- use,
 - create,
 - derive from,
 - map to AAT
- &
- go to LOD

3. Can a microthesaurus be made from an existing thesaurus?

	Structure	Example
YES	Classificatory structure	• <i>EUROVOC</i> • <i>Chinese Classified Thesaurus</i> • [<i>English Heritage Thesauri</i>]
YES	Faceted structure	• Art & Architecture Thesaurus (AAT) • FAST (Faceted Application of Subject Terminology)
YES/ Maybe	Deep hierarchies (family trees)	• Art & Architecture Thesaurus (AAT) • NASA Thesaurus • INSPEC Thesaurus • ASIS&T Thesaurus
NO/ Not-directly	flat structure [alphabetically organized]	• Subject headings lists • many thesauri

Microthesaurus: designated subset of a thesaurus that is capable of functioning as a complete thesaurus. -- ISO25964-2:2013

Example: Eurovoc

Europa > EuroVoc homepage > Domains and MT

Content language:

(en) English

Simple search



- Advanced search

Browse

- Browse the subject-oriented version

Download

- By domain
- Permuted alphabetical
- Multilingual list
- Alphabetical index
- EuroVoc SKOS/RDF
- EuroVoc XML

Your proposals

- Contribute

Domains

- ⊕ 04 POLITICS
- ⊕ 08 INTERNATIONAL RELATIONS
- ⊕ 10 EUROPEAN UNION
- ⊖ 12 LAW
 - 1206 sources and branches of the law
 - 1211 civil law
 - 1216 criminal law
 - 1221 justice
 - 1226 organisation of the legal system
 - 1231 international law
 - 1236 rights and freedoms
- ⊕ 16 ECONOMICS
- ⊕ 20 TRADE
- ⊕ 24 FINANCE
- ⊕ 28 SOCIAL QUESTIONS
- ⊕ 32 EDUCATION AND COMMUNICATIONS

"EuroVoc is split into 21 domains and 127 microthesauri.

Each domain is divided into a number of microthesauri.

A microthesaurus is considered as a concept scheme with a subset of the concepts that are part of the complete EuroVoc thesaurus."

Source: <http://eurovoc.europa.eu/drupal/?q=node/555>



Art & Architecture Thesaurus® Online Hierarchy Display

[New Search](#)

[Previous Page](#)

[View Selected Records](#)

[Clear All](#)

Click the  icon to view the hierarchy.

Check the boxes to view multiple records at once.

- ☐  Top of the AAT hierarchies
- ☒  Associated Concepts Facet
- ☐  Associated Concepts
- ☒  Physical Attributes Facet
- ☐  Attributes and Properties
- ☐  Conditions and Effects (Hierarchy Name)
- ☐  Design Elements
- ☐  Color (Facet)
- ☒  Styles and Periods Facet
- ☐  Styles and Periods
- ☐  Agents Facet
- ☐  People
- ☐  Organizations (Hierarchy Name)
- ☐  Living Organisms (Hierarchy Name)
- ☐ agents (general) [N]
- ☒  Activities Facet
- ☐  Disciplines (Hierarchy Name)
- ☐  Functions (Hierarchy Name)
- ☐  Events (Hierarchy Name)
- ☐  Physical and Mental Activities
- ☐  Processes and Techniques (Hierarchy Name)

AAT has 7 facets

- ☒  Materials Facet
- ☐  Materials (Hierarchy Name)
- ☒  Objects Facet
- ☐  Built Environment (Hierarchy Name)
- ☐  Components (Hierarchy Name)
- ☐  Furnishings and Equipment (Hierarchy Name)
- ☐  Object Genres (Hierarchy Name)
- ☐  Object Groupings and Systems (Hierarchy Name)
- ☐  Visual and Verbal Communication (Hierarchy Name)
- ☐  Brand Names (Facet)
- ☐  Brand Names (Hierarchy Name)

- ☐  Top of the AAT hierarchies
- ☐  Objects Facet
- ☐  Built Environment (Hierarchy Name)
- ☐  Settlements and Landscapes
- ☐  inhabited places
- ☐  <settlements by form>
- ☐  <settlements by function>
- ☐  <settlements
- ☐  <settlements
- ☐  <settlements
- ☐  <settlements
- ☐  <settlements
- ☐  <settlements
- ☐  landscapes (env
- ☐  cultural lands
- ☐  natural lands

- ☐  Top of the AAT hierarchies
- ☐  Objects Facet
- ☐  Built Environment (Hierarchy Name)
- ☐  Settlements and Landscapes
- ☐  inhabited places
- ☐  <settlements by form>
- ☐  agglomerations
- ☐ camps (temporary settlements)
- ☐  cities
- ☐ communes (administrative)
- ☐  communities (inhabited places)
- ☐ demes (inhabited places)
- ☐ hamlets
- ☐  linear settlements
- ☐ metropolitan areas
- ☐  towns
- ☐  villages
- ☐  <settlements by function>

CHIN's Professional Exchange

Canada

[Find Resources](#) [Jobs](#) [Funding](#) [Conferences & Training](#) [Artefacts Canada](#) [Add to Professional Exchange](#) [Help](#)

Home > Find Resources > Summary "Art & Architecture Thesaurus (AAT) Processes and Techniques Hierarchy"

[Back to List](#)

[First](#) [Previous](#) [Next](#) [Last](#)

Summary "Art & Architecture Thesaurus (AAT) Processes and Techniques Hierarchy"

Created by the J.Paul Getty Trust, the AAT is a thesaurus of terms used in the cataloguing and indexing of art, architecture, artifactual, and archival materials.

The Processes and Techniques of the AAT contains terminology for "actions and methods performed physically on or with materials and objects, and for processes occurring in materials and objects."

CHIN recommends the use of the AAT for museums with broad humanities collections. The terminology found in the AAT Processes and Techniques Hierarchy is appropriate for use in the *Technique* and *Decorative Technique* fields of the Artefacts Canada: Humanities database, as well as some Condition fields within museum collections management systems.

CHIN has contributed approximately 2600 French terms to the AAT; these are now visible within the AAT as French language equivalents for the most common terms. This bilingual version of the AAT is used to assist with search.

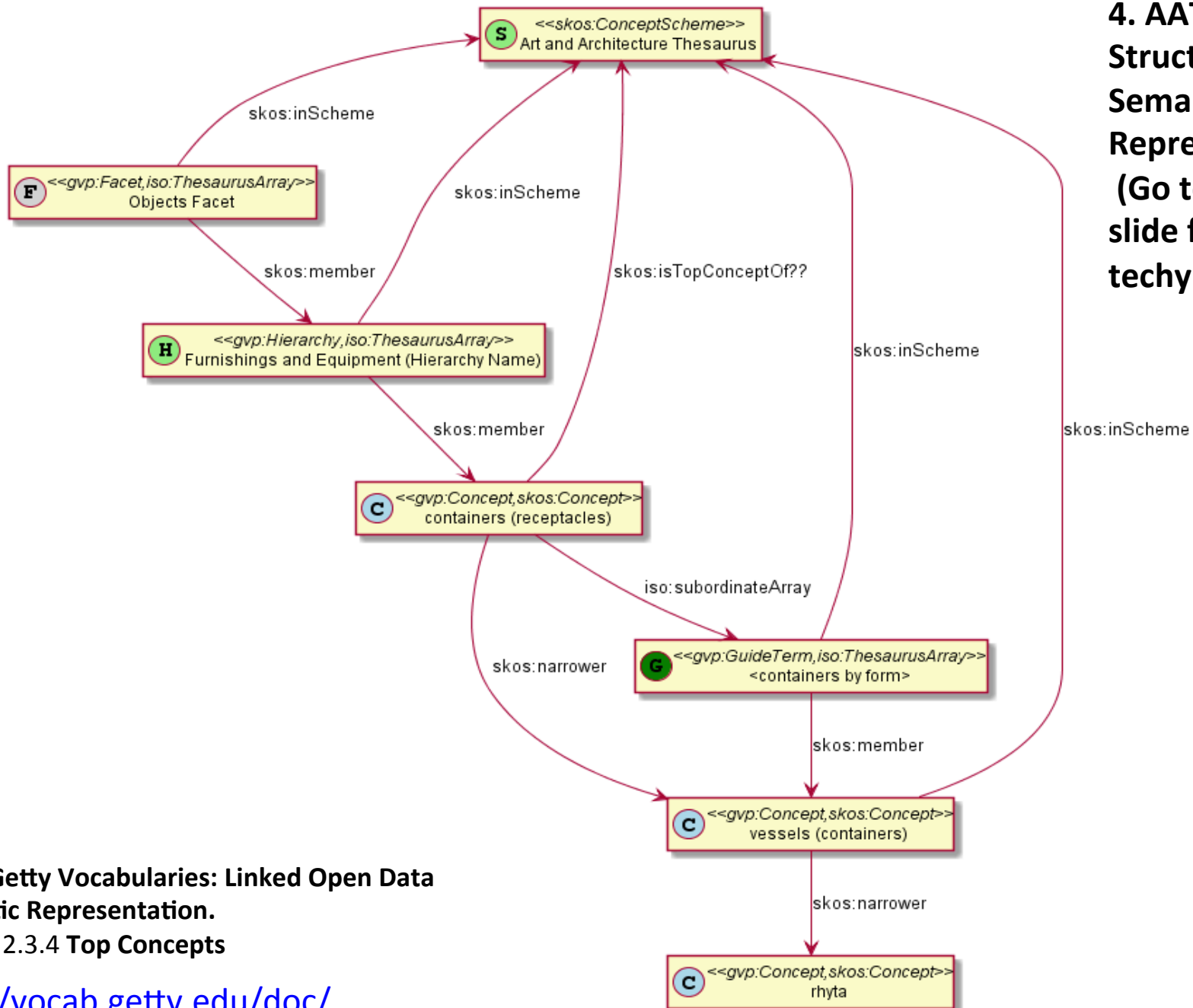
Institution / Organization: CHIN
Submitted: Canadian
Date: 2013-06
Source: Collection

- [Art & Architecture Thesaurus \(AAT\) Processes and Techniques Hierarchy](#)
- [Canadian Centre for Architecture Bilingual Term Lists](#)
- [Art & Architecture Thesaurus \(AAT\) Agents Facet](#)
- [Cultural Objects Name Authority \(CONA\)](#)
- [Art & Architecture Thesaurus \(AAT\) Materials Facet](#)
- [Art & Architecture Thesaurus \(AAT\) Physical Attributes Facet](#)
- [Art & Architecture Thesaurus \(AAT\)](#)
- [Art & Architecture Thesaurus \(AAT\) Disciplines Hierarchy](#)
- [Art & Architecture Thesaurus \(AAT\) Objects Facet](#)
- [Art & Architecture Thesaurus \(AAT\) Styles and Periods Facet](#)
- [The Info-Muse classification system for fine arts and decorative arts museums](#)
- [Testing a Vocabulary Standard Against Cataloguing Practice in Canadian Museums](#)
- [Guidelines for Forming Language Equivalents: A Model Based on the Art & Architecture Thesaurus](#)

CHIN listed
890+
recommended
resources.

AAT's facets
and
hierarchies
that are listed
individually.

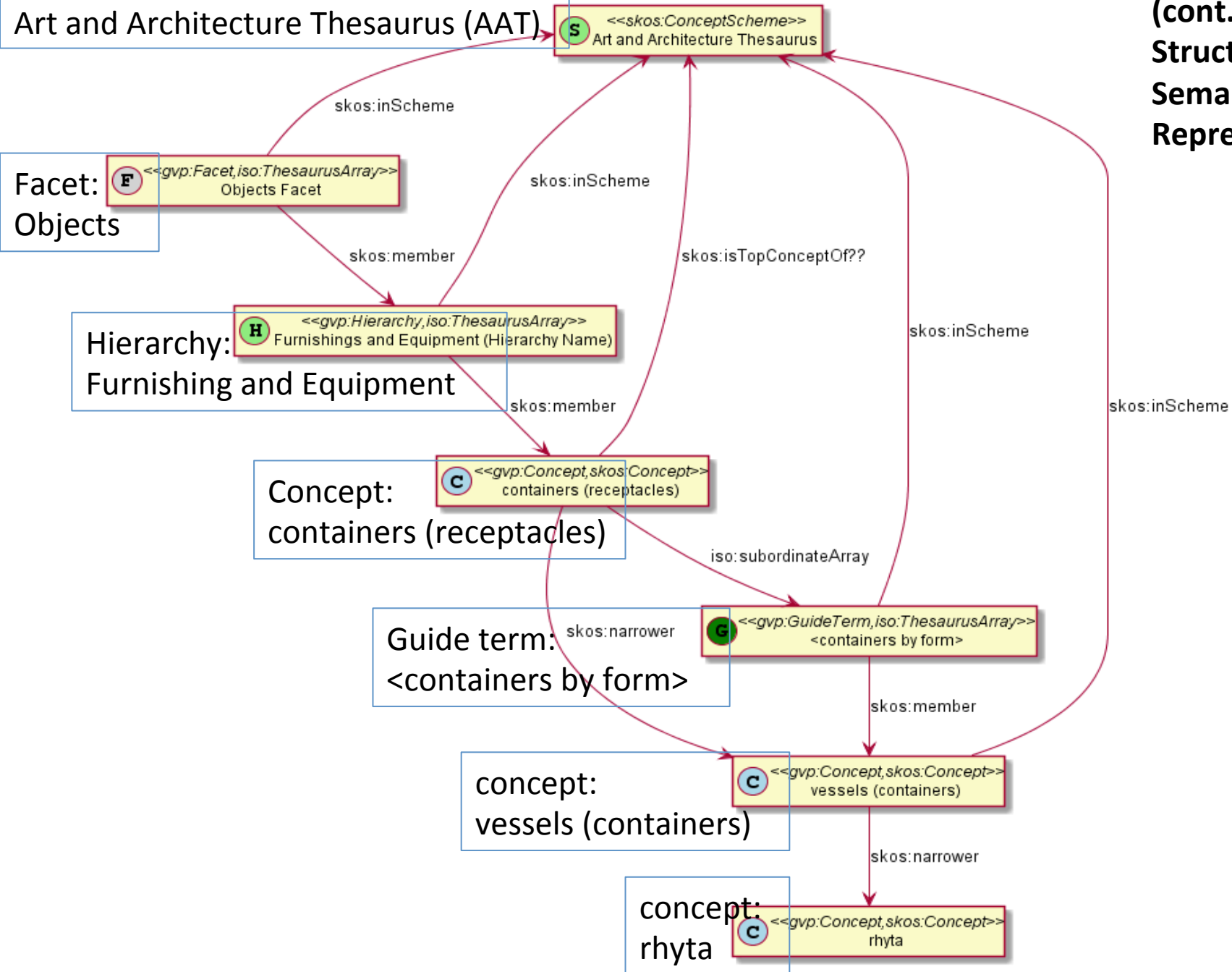
4. AAT Structure's Semantic Representation (Go to next slide for non- techy view.)

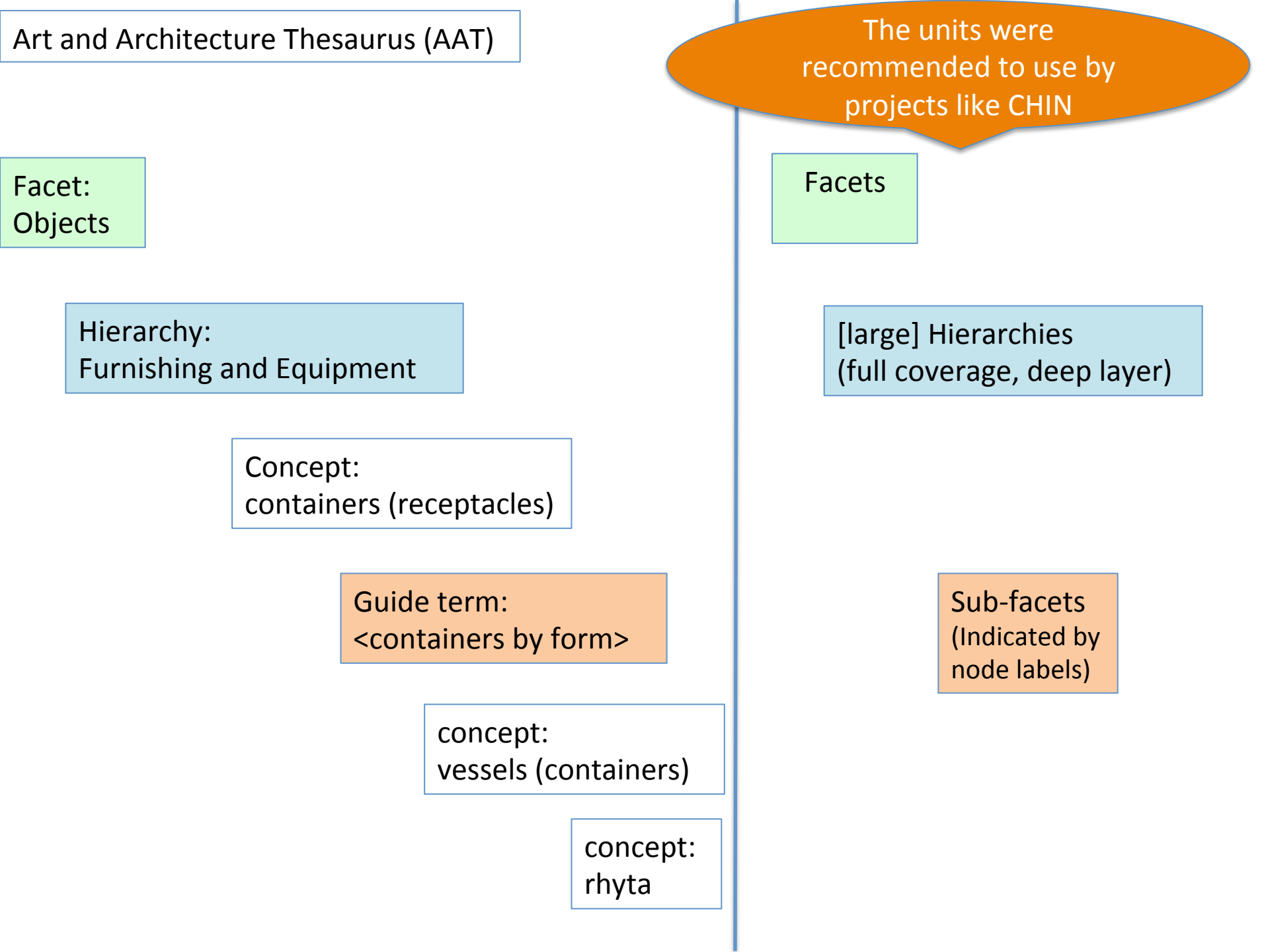


From: Getty Vocabularies: Linked Open Data
Semantic Representation.
Section 2.3.4 Top Concepts

<http://vocab.getty.edu/doc/>
[#The Getty Vocabularies and LOD](#)

(cont.) AAT Structure's Semantic Representation





URI(s)

- > <http://id.loc.gov/authorities/subjects/sh85142374>
- > <info:lc/authorities/sh85142374>
- > <http://id.loc.gov/authorities/sh85142374#concept>

Instance Of

- > [MADS/RDF Topic](#)
- > [MADS/RDF Authority](#)
- > [SKOS Concept](#) 

Scheme Membership

- > [Library of Congress](#)

Collection Membership

- > [LCSH Collection - A](#)
- > [LCSH Collection - G](#)
- > [LCSH Collection - M](#)

Broader Terms

- >  [Containers](#)

Narrower Terms

- >  [Flower vases](#)
- >  [Presentation vas](#)
- >  [Stone vases](#)
- >  [Vase-painting](#)

Related Terms

- >  [Urns](#)

Closely Matching Concepts from Other Schemes

- >  [Vase](#) 
- >  [Vase](#) 

```
<rdf:RDF>
- <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh85142374">
  <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
  <skos:prefLabel xml:lang="en">Vases</skos:prefLabel>
  <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85031520"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh85142364"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh2012001607"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh2007001063"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh2004005300"/>
  <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh85141432"/>
- <skos:closeMatch>
  - <rdf:Description rdf:about="http://d-nb.info/gnd/4126533-6">
    <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
    <skos:prefLabel xml:lang="DE">Vase</skos:prefLabel>
  </rdf:Description>
</skos:closeMatch>
```

Concept

BT

concept

NT

concept:

What are usually
available in a flat
structured LOD
thesaurus

Source: <http://id.loc.gov/authorities/subjects/sh85142374.skos.rdf>



... so are in AAT;

rhyta

Source:<http://vocab.getty.edu/aat/300198841>

Subject (100 of 193)

Predicate

Object

All

Website

Hierarchy

Download in: JSON

RDF

N3/Turtle

N-Triples

Inference

Explicit only

Statements in which the resource exists as a subject.

Predicate	Object
rdf:type	gvp:Concept

xl:prefLabel	aat_term:1000198841-el-Latn , aat_term:1000198841-en , aat_term:1000316909-es , aat_term:1000316909-fr , aat_term:1000498969-nl , aat_term:1000589081-zh-Hant , aat_term:1000589085-zh-Latn-pinyin-x-notone , aat_term:1000589090-zh-Latn-wadegile , aat_term:1000589091-de , aat_term:1000591848-zh-Latn-pinyin
------------------------------	--

xl:altLabel	gvp:parentString drinking vessels, <vessels for serving and consuming food>, culinary containers, <containers by function or use> (Hierarchy Name), Furnishings and Equipment (Hierarchy Name), Objects Facet
-----------------------------	---

gvp:parentStringAbbrev	drinking vessels, <vessels for serving and consuming food>, ... Objects Facet
--	---

gvp:displayOrder	18
----------------------------------	----

gvp:broaderGeneric	aat:300194567 , aat:300198333 , aat:300198865
------------------------------------	---

gvp:broaderPreferred	aat:300194567
--------------------------------------	-------------------------------

gvp:broaderNonPreferred	aat:300198333 , aat:300198865
---	---

gvp:prefLabelGVP	aat_term:1000198841-en
----------------------------------	--

gvp:prefLabelLoC	aat_term:1000198841-en
----------------------------------	--

dcterms:source	aat_source:2000030301-subject-300198841 , aat_source:2000051089-subject-300198841 , aat_source:2000052378
--------------------------------	---

dc:identifier	300198841
-------------------------------	---------------------------

gvp:prefLabelGVP/xl:literalForm	aat_term:100043229 , aat:300197140 , aat:300197148
---	--

prov:wasGeneratedBy	aat_rev:5000057716
-------------------------------------	------------------------------------

Concept

BT

concept

NT

concept:

Results are obtained by entering the following in

<http://vocab.getty.edu/sparql> :

5.1.10 Find Subject by Exact English PrefLabel

select * {?subj gvp:prefLabelGVP/xl:literalForm

"rhyta"@en}

Art and Architecture Thesaurus (AAT)

Facet:
Objects

Hierarchy:
Furnishing and Equipment

Concept:
containers (receptacles)

Guide term:
<containers by form>

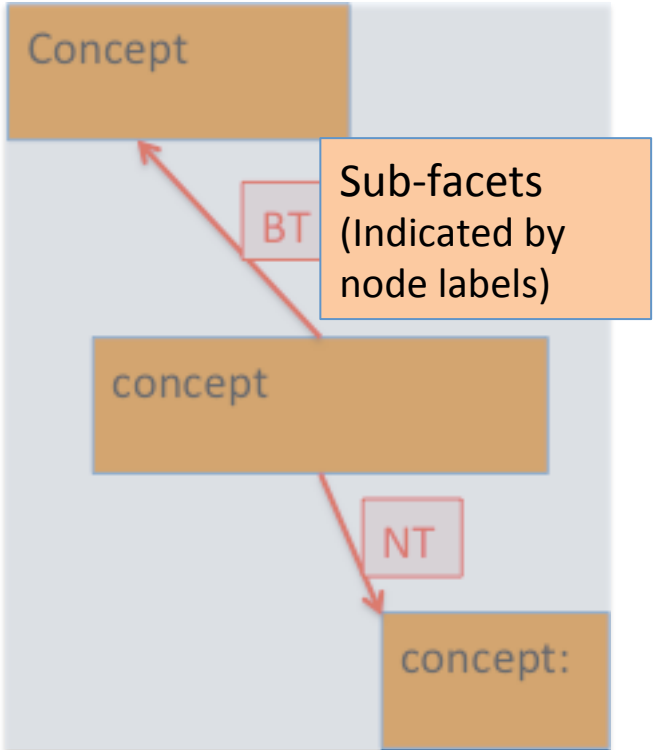
concept:
vessels (containers)

concept:
rhyta

: but AAT LOD has more:

Facets

[large] Hierarchies
(full coverage, deep layer)



5. An example

-- Use a <Guide Term> to obtain all
concept URIs
in a facet or hierarchy

Part 1. Get Data

ID: 300117143

 <object genres by function> (object genres (object Name))

Terms:

object genres by function (**preferred**, C, U, English-I)
objectgenres naar functie (C, U, Dutch-P, D, U, U)
categorías de objetos por función (C, U, Spanish-P,

Steps:

After choosing a facet or a hierarchy from AAT...

1. Get the ID
2. Go to SPARQL Endpoint
→next slide

objectgenres naar functie..... [RKD, AAT-Ned Pre
..... AAT-Ned (1994-)

Subject: [CDBP-DIBAM, RKD, AAT-Ned, VP]

- ☐  Top of the AAT hierarchies
- ☐  Objects Facet
- ☐  Object Genres (Hierarchy Name)
- ☐  object genres (object classifications)
- ☐  <object genres by function>
- ☐ accessories
- ☐  aids to navigation
- ☐  beacons [N]
- ☐ buoys [N]
- ☐ lighthouses [N]
- ☐ light stations [N]
- ☐  navigational instruments [N]
- ☐  amulets
- ☐ Thor's hammers (amulets) [N]
- ☐ armrests (object genre)
- ☐ backdrops
- ☐ backrests
- ☐  ceremonial objects
- ☐ baptismal syringes
- ☐ bow stands [N]
- ☐ brush aspergilla [N]
- ☐ calumets [N]
- ☐  ceremonial chairs [N]
- ☐  ceremonial containers [N]
- ☐  ceremonial costume [N]
- ☐  ceremonial sound devices [N]
- ☐  ceremonial watercraft [N]
- ☐  ceremonial weapons [N]
- ☐ déblés [N]

Step 2. Go to Getty Vocab SPARQL Endpoint: <http://vocab.getty.edu/sparql>



Getty Vocabularies: LOD

SPARQL

Any ▾

Search...

Search

Brief ▾

SPARQL Query

Query:

1

☒ Include inferred

☐ Expand results over equivalent URIs

Submit

Sample queries:

[Append predefined namespaces:](#)



SPARQL Select template, [5.1.1 Top-level Subjects](#), [5.1.2 Descendants of a Given Parent](#), [5.1.3 Subjects by Contributor Id](#), [5.1.4 Subjects by Contributor Abbrev](#), [5.1.5 Preferred Ancestors](#), [5.1.6 Full Text Search Query](#), [5.1.7 Find Person Occupations by broaderExtended](#), [5.1.8 Find Person Occupations by Double FTS](#), [5.1.9 Find Quartz Timepieces by Double FTS](#), [5.1.10 Find Subject by Exact English PrefLabel](#), [5.1.11 Find Subject by Language-Independent PrefLabels](#), [5.1.12 Find Subject by Any Label](#), [5.1.13 Find Terms by Language Tag](#), [5.1.14 Find Ordered Subjects](#), [5.1.15 Find Ordered Hierarchies](#), [5.1.16 Get Subjects in Order](#), [5.1.17 Find Contributors by Vocabulary](#), [5.1.18 Find Sources by Vocabulary](#), [5.2.1 Subject Preferred Label](#), [5.2.2 All Data for Terms of Subject](#), [5.2.3 Preferred and Vernacular Terms](#), [5.2.4 Scientific Names by Language](#), [5.2.5 Scientific Names not in English and Latin](#),

Getty Vocabularies: LOD : ...

vocab.getty.edu/sparql

Getty Vocabularies: LOD SPARQL Any Search...

SPARQL Query

Query:

```
1 # 5.1.2 Descendants of a Given Parent
2 select * {?x gvp:broaderExtended aat:300194567; skos:inScheme aat: }
```

Sample queries:

[Append predefined namespaces:](#)



SPARQL Select template, 5.1.1 Top-level Subjects, 5.1.2 Descendants of a Given Parent, 5.1.3 Subjects by Contributor Id, 5.1.4 Subjects by Contributor Abbrev, 5.1.5 Preferred Ancestors, 5.1.6 Full Text Search Query, 5.1.7 Find Person Occupations by broaderExtended, 5.1.8 Find Person Occupations by Double FTS, 5.1.9 Find Quartz Timepieces by Double FTS, 5.1.10 Find Subject by Exact English PrefLabel, 5.1.11 Find Subject by Language-Independent PrefLabels, 5.1.12 Find Subject by Language-Independent PrefLabels, 5.1.13 Find Subject by Language-Independent PrefLabels, 5.1.14 Find Ordered Subjects, 5.1.15 Find Ordered Hierarchies, 5.1.16 Get Subjects by Language, 5.1.17 Find Subjects by Language, 5.1.18 Find Sources by Vocabulary, 5.2.1 Subject Preferred Label, 5.2.2 All Subjects by Language, 5.2.3 All Subjects by Language, 5.2.4 Scientific Names by Language, 5.2.5 Scientific Names not in English, 5.2.6 Scientific Names by Language, 5.2.7 Scientific Names by Language, 5.2.8 Historic Information of Terms, 5.2.9 Preferred Terms for Contributors, 5.2.10 Preferred Terms for Contributors, 5.2.11 Concepts Related by Particular Associative Relation, 5.2.12 Language, 5.3.1 Places, with English or GVP Label, 5.3.2 Places, with English or GVP Label, 5.3.3 Places by Direct and Hierarchical, 5.3.4 Places by Direct and Hierarchical, 5.3.5 Inhabited Places That Were Sovereign States, 5.3.6 Places by Type and Containment, 5.3.7 Places by Type and Containment, 5.3.8 Places by Triple FTS, 5.3.9 Places by FTS Parents, 5.3.10 Capitals by type, 5.3.11 Capitals by Association, 5.3.12 Members of the European Union, 5.3.13 Members of the United Nations, 5.3.14 Geo Chart with SPARQL, 5.3.15 Column Chart with SPARQL, 5.3.16 Countries and Capitals By Type and Containment, 5.3.17 Places by Coordinate Bounding Box, 5.3.18 Places Within Bounding Box, 5.3.19 Places by Type Within Bounding Box, 5.3.20 Places Outside Bounding Box (Overseas Possessions), 5.3.21 Places Nearby Each Other, 5.4.1 Descriptive Info from VOID, 5.4.2 Number of Entities from VOID, 5.4.3 Number of Local Sources (Dynamic), 5.4.4 Number of Global Sources (Dynamic), 5.4.5 Number of Terms per Language, 5.4.6 Number of AAT Revision Actions, 5.5.1 Ontology Classes and Properties, 5.5.2 Ontology Values

Step 3. Choose "Descendants of a Given Parent" from the template, click.

→ The template's text will show on the top Query box.

Steps

4. Replace the ID (e.g., 300117143) in the Query template
[you may modify to add more requests]
5. Submit
6. Get all URIs and labels under this guide

SPARQL Query

Query:

```
1 # 5.1.2 Descendants of a Given Parent
2 select * {?x gvp:broaderExtended aat:300117143.
3   ?x gvp:prefLabelGVP [xl:literalForm ?l]; skos:inScheme aat:
4     } order by ?l
5
```

Note: I replaced the aat **ID**, also inserted **a line to get the labels**, and **sort by label**. Here is the text of the query:

```
select * {?x gvp:broaderExtended aat:300117143.
?x gvp:prefLabelGVP [xl:literalForm ?l]; skos:inScheme aat:
} order by ?l
```

It gave me the results in
2 seconds:

SPARQL Query

Results for # 5.1.2 Descendants (100 of 525)

Download SPARQL Results in: [JSON](#) | [XML](#)

x	I
aat:300391225	<religious visual works by related event>@en
aat:300391082	Advent candleholders@en
aat:300391224	Advent wreaths@en
aat:300178242	Andachtsbilder@en
aat:300265145	Bhagavad-gītās@en
aat:300263184	Bible stories@en
aat:300264513	Bibles@en
aat:300263411	Bibles historiales@en

- ☐  Top of the AAT hierarchies
- ☐  Objects Facet
- ☐  Object Genres (Hierarchy Name)
- ☐  object genres (object classifications)
- ☐  <object genres by function>
- ☐ accessories
- ☐  aids to navigation
- ☐  beacons [N]
- ☐ buoys [N]
- ☐ lighthouses [N]
- ☐ light stations [N]
- ☐  navigational instruments [N]
- ☐  amulets
- ☐ Thor's hammers (amulets) [N]
- ☐ armrests (object genre)
- ☐ backdrops
- ☐ backrests
- ☐  ceremonial objects

- ☐  <lighting devices by function>
- ☐  beacons
- ☐  aeronautical beacons
- ☐ airport beacons
- ☐ airway beacons
- ☐ landmark beacons
- ☐ obstruction beacons
- ☐ lighthouse lamps
- ☐ lightships [N]

aat:300264447	agere lfa@en
aat:300262796	aids to navigation@en
aat:300210466	aigrettes (plumes)@en
aat:300181617	airport beacons@en
aat:300181651	airway beacons@en
aat:300263682	akonkromfi@en
aat:300210415	albs@en
aat:300198819	alms dishes@en
aat:300210416	almuces (hoods)@en
aat:300263075	aloalo@en
aat:300391092	
aat:300391083	
aat:300266585	altar cruets@en
	altarpieces@en
	alusi@en
	amices@en
	ampullae@en
	amulets@en

(I checked to make sure that the results are from multiple levels in the hierarchy.)

Step 7. Download JSON format data.

Download Options:

- (1) JSON*
- (2) XML

*JSON (JavaScript Object Notation) is a lightweight data-interchange format.

SPARQL Query

PREFIX gvp:... (100 of 525)

Download SPARQL Results in: [JSON](#) | [XML](#)

	I
	<religious visual works by related event>@en
	Advent candleholders@en
aat:300391224	Advent wreaths@en
aat:300178242	Andachtsbilder@en
aat:300265145	Bhagavad-gītās@en
aat:300263184	Bible stories@en
aat:300264513	Bibles@en
aat:300263411	Bibles historiques@en
aat:300211640	Bibles moralisées@en

How to manage it by a non-techy person?

Non-techy person's wish:

I can see what are in the dataset;

I can use a spreadsheet to open and manage it.

Techy-person can prepare the file as:

1. From a JSON* file → convert to CSV** file (can be opened as spreadsheet) using an open source converter, or

2. From a JSON file → Manage from OpenRefine (open source system) or export to a spreadsheet

Results of the JSON file.

```
{
  "head" : {
    "vars" : [ "x", "l" ]
  },
  "results" : {
    "bindings" : [ {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300217935"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "'űds"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300264679"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "8mm (size: videotape)"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300055897"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "<artistic devices: literature>"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300133084"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "<composition and compositional elements>"
      }
    }
  ]
}
```

Descendants of a Given Parent:

```
select * {?x gvp:broaderExtended aat:
300117143.
?x gvp:prefLabelGVP [xl:literalForm ?l];
skos:inScheme aat:
} order by ?l
```

SPARQL Query

Results for # 4.1.2 Descendants... (100 of 523)

Download SPARQL Results in [JSON](#) [XML](#)

x	l
aat:300161886	striking blocks@en
aat:300202542	keepsakes (books)@en
aat:300220519	religious texts@en
aat:300210422	buskins (stockings)@en
aat:300181600	aeronautical beacons@en
aat:300007739	beacons@en
aat:300182941	lighthouse lamps@en
aat:300007741	lighthouses@en
aat:300180588	Hanukkah lamps@en
aat:300190801	votive lamps@en

Establish a 'Project',
then ready to edit.

Open... Export ▾ Help

Facet / Filter Undo / Redo 0

523 rows

Extensions: undefined ▾

Show as: **rows** records Show: 5 10 25 50 rows

« first < previous 1 - 10 next > last »

Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started?

[Watch these screencasts](#)

▼ All	▼ _l-type	▼ _l-value	▼ _l-xml:lang	▼ _x-type	▼ _x-value
☆ 1.	literal	<religious visual works by related event>	en	uri	http://vocab.getty.edu/aat/300391225
☆ 2.	literal	Advent candleholders	en	uri	http://vocab.getty.edu/aat/300391082
☆ 3.	literal	Advent wreaths	en	uri	http://vocab.getty.edu/aat/300391224
☆ 4.	literal	Andachtsbilder	en	uri	http://vocab.getty.edu/aat/300178242
☆ 5.	literal	Bhagavad-gītās	en	uri	http://vocab.getty.edu/aat/300265145
				uri	http://vocab.getty.edu/aat/300263184
				uri	http://vocab.getty.edu/aat/300264513
				uri	http://vocab.getty.edu/aat/300263411
				uri	http://vocab.getty.edu/aat/300211640
				uri	http://vocab.getty.edu/aat/300026456

▼ _l-value

<religious visual works by related event>

▼ _l-

Advent candleholders

en

Advent wreaths

en

Andachtsbilder

en

Bhagavad-gītās

edit

en

Bible stories

en

Bibles

en

Bibles historiales

en

Bibles moralisées

en

Note: OpenRefine can be used for many other functions for management, clean up, reconcile, etc.

← → ↻

localhost:3333/project?project=2387700166074

★ 🐞 ☰

Refine^{OPEN}

AAT Permalink

Facet / Filter

Undo / Redo 0

523 rows

Show as: rows records Show: 5 10 25 50 rows

▼ All	▼ _l - type	▼ _l - value	▼ _l - xml:lang	▼ _x - type	▼ _x - value
★ ↵	1.	literal	<religious visual works by related event>	en	uri
★ ↵	2.	literal	Advent candleholders	en	uri
★ ↵	3.	literal	Advent wreaths	en	uri
★ ↵	4.	literal	Andachtsbilder	en	uri
★ ↵	5.	literal	Bhagavad-gītās	en	uri
★ ↵	6.	literal	Bible stories	en	uri
★ ↵	7.	literal	Bibles	en	uri
★ ↵	8.	literal	Bibles historiques		
★ ↵	9.	literal	Bibles moralisées		
★ ↵	10.	literal	Biblia pauperum		

Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started?
[Watch these screencasts](#)

Export

Open... Export ▼ Help

Export project

Tab-separated value

Comma-separated value

HTML table

Excel

ODF spreadsheet

Triple loader

MQLWrite

Custom tabular exporter...

Templating...

Open... Export ▼

Export project

Tab-separated value

Comma-separated value

HTML table

Excel

ODF spreadsheet

Triple loader

MQLWrite

Custom tabular exporter...

Templating...

Use other templates to obtain needed data for your microthesauri. [More examples](#)

- Find AAT URIs and labels according to a Contributor:

```
#5.1.3 Subjects by Contributor Id
select * {
  ?x a gvp:Subject; dct:contributor aat_contrib:
10000178.
  ?x gvp:prefLabelGVP [xl:literalForm ?l]
}
```

- Find, within this set of data, only those involving a particular contributor, e.g., by CDBP-DIBAM (Dirección de Bibliotecas, Archivos y Museos; Santiago, Chile), id: 300117143.)

```
select ?x ?l ?contrib {
  ?x gvp:broaderExtended aat:300117143.
  ?x gvp:prefLabelGVP [xl:literalForm ?l].
  ?x dct:contributor aat_contrib:10000131.
}
```

Some other cases of using AAT LOD

Integrating AAT into editors

E.g., EADitor
Plug-in for Adobe Bridge
Web Taxonomy plugin

Visualization

Visualize the hierarchies
Visualize around an individual concept

Multilingual services

e.g., Europeana semantic enrichment

Portal enrichment

e.g., Europeana. Search mapping to AAT by facets: Object, Activities, Format, Type, Material, etc.

Extending to multilingual

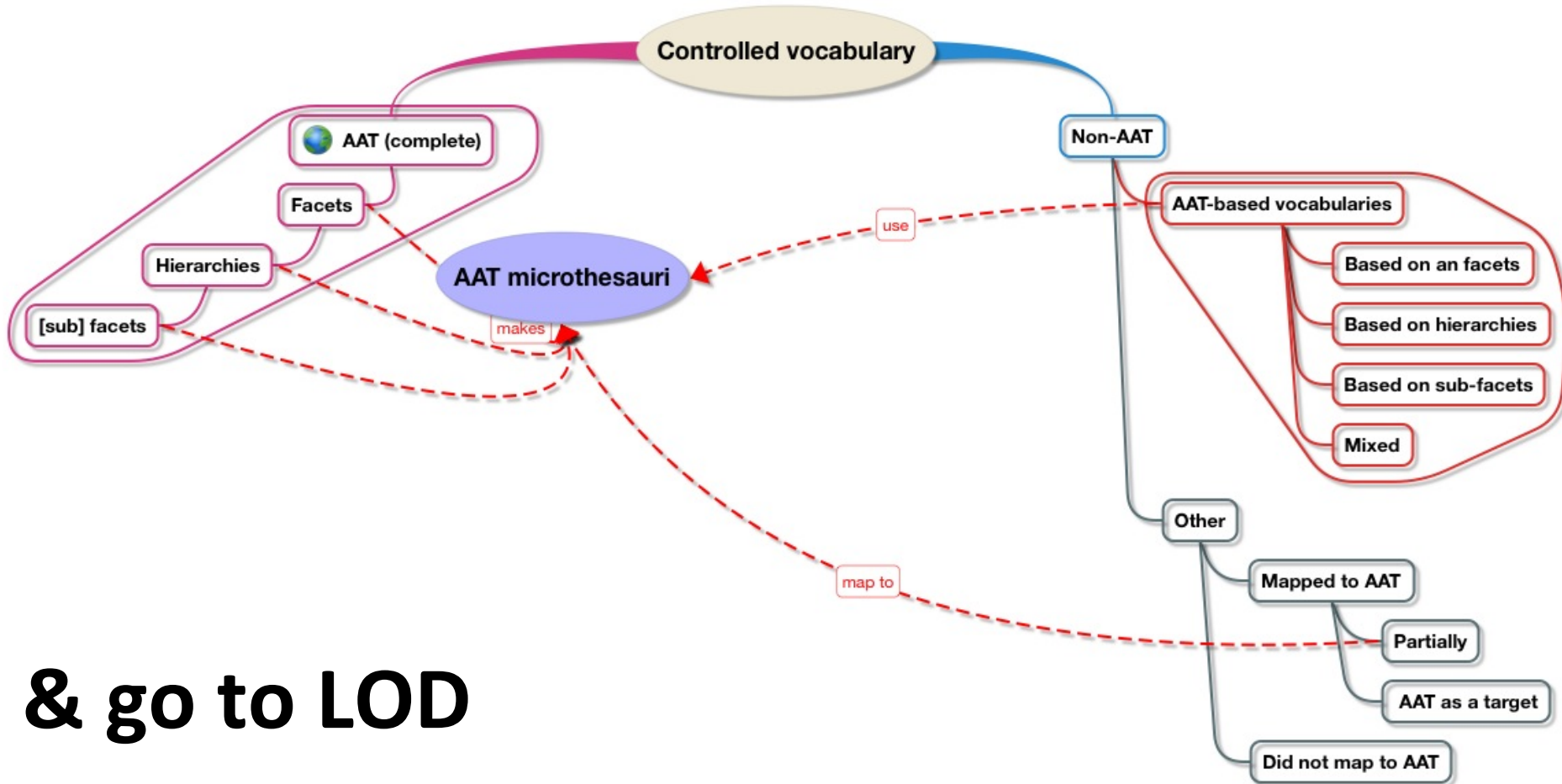
Use by digital art history projects



6. Conclusion

LOD AAT Microthesauri

- use,
- create,
- derive from, &
- map to



& go to LOD

THANK YOU!

Using KOS as the Connectors of Linked Datasets

Imma Subirats

-- Food and Agriculture Organization of the United Nations (Italy)

Marcia Lei Zeng

-- Kent State University (USA)