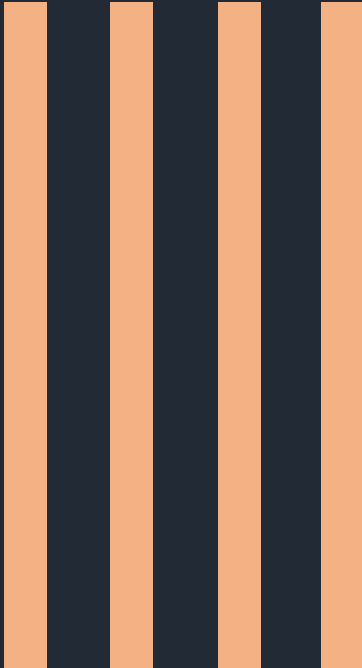
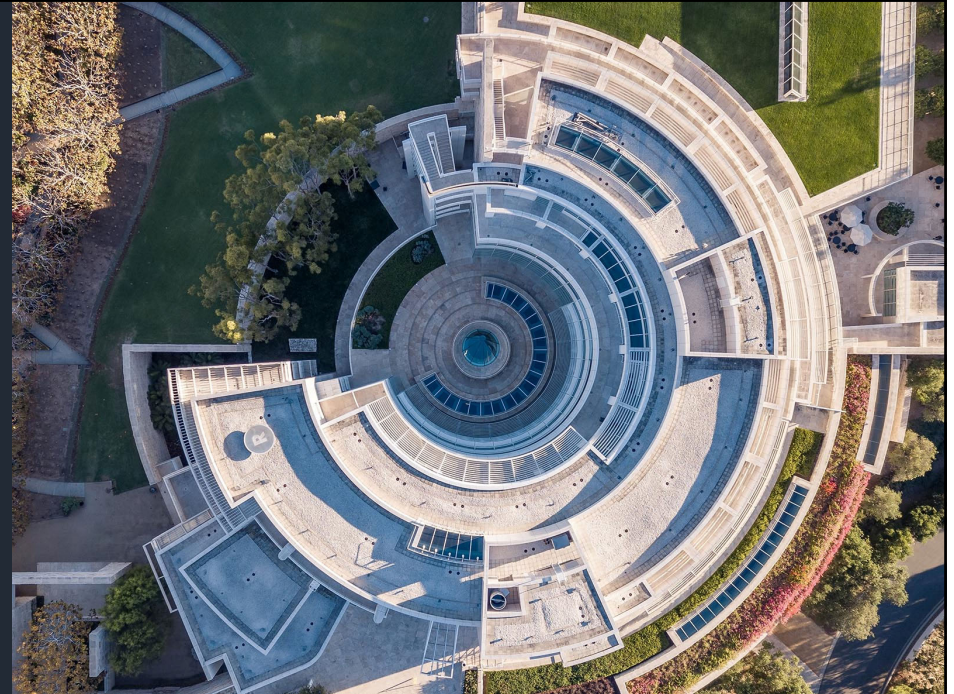




LOD, Conservation Terminologies, and the AAT



Linked Conservation Data terminology workshop

Jonathan Ward, Senior Editor

Getty Vocabulary Program

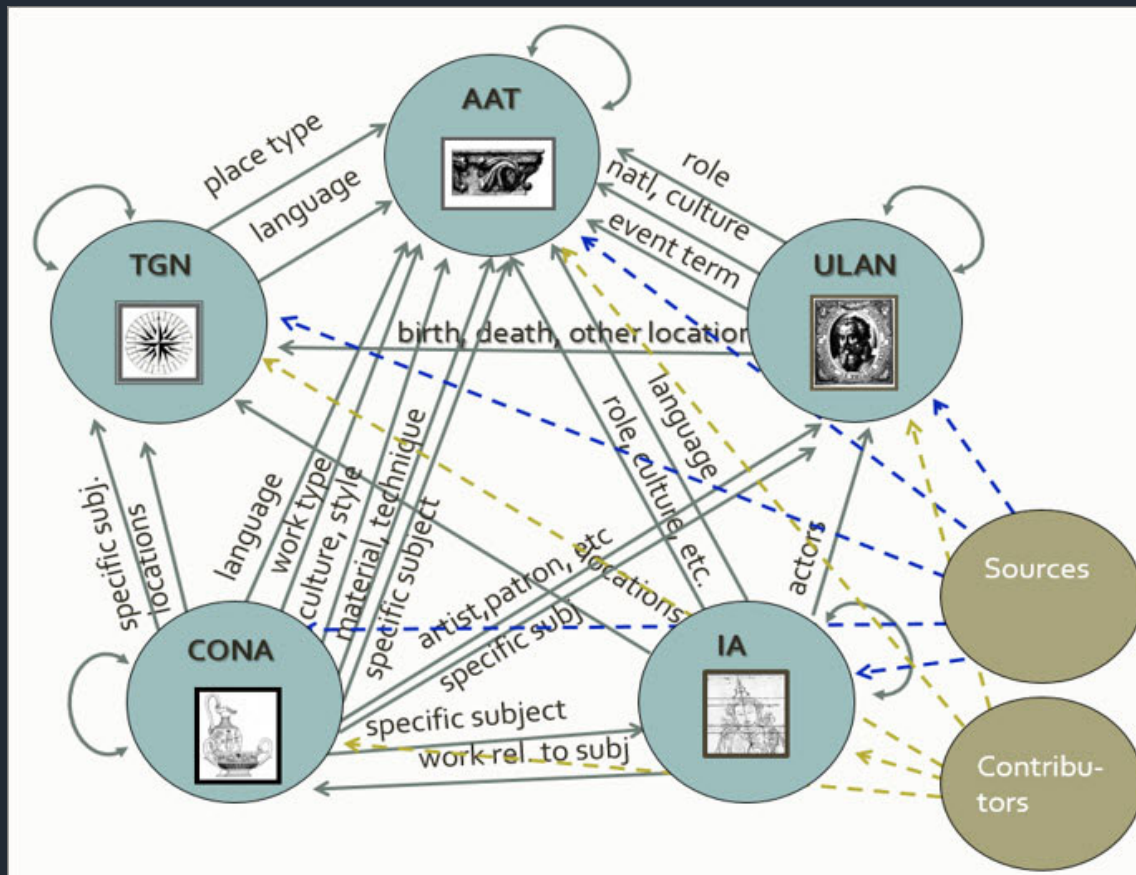
Getty Research Institute

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Our Journey to Linked Open Data (LOD)

- Open Content Initiative and the GRI Portal
- Concepts are from scholarly and trusted sources
- All concepts and terms have unique identifiers
- Vocabularies share a core data structure
- Vocabularies are linked to each other through core fields

Getty Vocabularies are linked to each other:



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Our Journey to Linked Open Data (LOD)

- Key analysis by Dr. Marcia Zeng
- Outside vendor hired; funding provided
- AAT released in 2014
- First implementation was SKOS-based and used numerous ontologies:

Our Journey to Linked Open Data (LOD)

Ontologies used:

Thesaurus information: SKOS, SKOSXL, ISO 25964

Common properties: Dublin Core (DC), Dublin Core Terms (DCT)

Sources and contributors: Bibliographic Ontology (BIBO), Friends of a Friend (FOAF)

Geographic information: W3C Geo Ontology (WGS)

Revision History: Provenance (PROV)

System properties: Resource Description Framework (RDF), RDF Schema (RDFS), Web Ontology Language (OWL), and XML Schema Definition (XSD)

Implementation of the conversion: RDB to RDF Mapping Language (R2RML)

LOD Serializations from vocab.getty.edu

[aat_300198841.json](#)

JSON

```

1 {
2   "head": {
3     "vars": [ "Subject", "Predicate", "Object" ]
4   },
5   "results": {
6     "bindings": [ {
7       "Subject": {
8         "type": "uri",
9         "value": "http://vocab.getty.edu/aat/300198841"
10      },
11      "Predicate": {
12        "type": "uri",
13        "value": "http://www.w3.org/1999/02/22-rdf-syntax-ns#type"
14      },
15      "Object": {
16        "type": "uri",
17        "value": "http://vocab.getty.edu/ontology#Subject"
18      }
19    }, {
20      "Subject": {
21        "type": "uri",
22        "value": "http://vocab.getty.edu/aat/300198841"
23      },
24      "Predicate": {
25        "type": "uri",
26        "value": "http://www.w3.org/1999/02/22-rdf-syntax-ns#type"
27      },
28      "Object": {
29        "type": "uri",
30        "value": "http://www.w3.org/2004/02/skos/core#Concept"
31      }
32    }
33  ]
34 }

```

[aat_300198841.jsonld](#)

JSONLD

```

43 {
44   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
45   "@value": "2008-02-09T15:13:55"
46 },
47 {
48   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
49   "@value": "2018-10-28T11:19:07"
50 },
51 {
52   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
53   "@value": "2018-10-28T11:20:10"
54 },
55 {
56   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
57   "@value": "2011-01-07T12:18:43"
58 },
59 {
60   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
61   "@value": "2014-07-31T13:54:38"
62 },
63 {
64   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
65   "@value": "2014-07-31T15:49:13"
66 },
67 {
68   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
69   "@value": "2014-07-31T15:56:08"
70 },
71 {
72   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
73   "@value": "2014-08-01T08:38:17"
74 },
75 {
76   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
77   "@value": "2008-10-30T15:53:12"
78 },
79 {
80   "@type": "http://www.w3.org/2001/XMLSchema#dateTime",
81   "@value": "2002-11-18T11:55:43"
82 }

```

[aat_300198841.rdf](#)

RDF

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <rdf:RDF
3   xmlns:aat="http://vocab.getty.edu/aat/"
4   xmlns:aat_contrib="http://vocab.getty.edu/aat/contrib/"
5   xmlns:aat_rel="http://vocab.getty.edu/aat/rel/"
6   xmlns:aat_rev="http://vocab.getty.edu/aat/rev/"
7   xmlns:aat_scopeNote="http://vocab.getty.edu/aat/scopeNote/"
8   xmlns:aat_source="http://vocab.getty.edu/aat/source/"
9   xmlns:aat_source_rev="http://vocab.getty.edu/aat/source/rev/"
10  xmlns:aat_term="http://vocab.getty.edu/aat/term/"
11  xmlns:adms="http://www.w3.org/ns/adms#"
12  xmlns:bibo="http://purl.org/ontology/bibo/"
13  xmlns:bio="http://purl.org/vocab/bio/0.1/"
14  xmlns:cc="http://creativecommons.org/ns#"
15  xmlns:dc="http://purl.org/dc/elements/1.1/"
16  xmlns:dcate="http://www.w3.org/ns/dcate#"
17  xmlns:dct="http://purl.org/dc/terms/"
18  xmlns:dctype="http://purl.org/dc/dcmitype/"
19  xmlns:fmt="http://www.w3.org/ns/formats/"
20  xmlns:foaf="http://xmlns.com/foaf/0.1/"
21  xmlns:gvp="http://vocab.getty.edu/ontology#"
22  xmlns:gvp_lang="http://vocab.getty.edu/language/"
23  xmlns:iso="http://purl.org/iso25964/skos-these#"
24  xmlns:luc="http://www.ontotext.com/owlim/lucenes#"
25  xmlns:ontogeo="http://www.ontotext.com/owlim/geo#"
26  xmlns:owl="http://www.w3.org/2002/07/owl#"
27  xmlns:prov="http://www.w3.org/ns/prov#"
28  xmlns:ptop="http://www.ontotext.com/proton/protontop#"

```

[aat_300198841.ttl](#)

N-Triples

```

1 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://vocab
2 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://vocab
3 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://vocab
4 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyta"es .
5 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyta"bel-latn .
6 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyton"es .
7 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyton"bel-latn .
8 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyton"es .
9 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyton"es .
10 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhyton"es .
11 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
12 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
13 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
14 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
15 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
16 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
17 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
18 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
19 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
20 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
21 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
22 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
23 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
24 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
25 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
26 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
27 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
28 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
29 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
30 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
31 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
32 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
33 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
34 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
35 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
36 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
37 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
38 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
39 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .
40 <http://vocab.getty.edu/aat/300198841> <http://www.w3.org/2000/01/rdf-schema#label> "rhytons"es .

```

[aat_300198841.ttl](#)

Turtle/N3

```

41 @prefix ulan_source_rev: <http://vocab.getty.edu/ulan/source/rev/> .
42 @prefix ulan_term: <http://vocab.getty.edu/ulan/term/> .
43 @prefix vann: <http://www.linkedmodel.org/schema/vann/> .
44 @prefix vann: <http://purl.org/vocab/vann/> .
45 @prefix vcard: <http://www.w3.org/2006/vcard/vcard#> .
46 @prefix vcard: <http://data.11rm.fr/ontology/vcard#> .
47 @prefix voaf: <http://purl.org/voccomms/voaf#> .
48 @prefix voag: <http://voag.linkedmodel.org/voag#> .
49 @prefix void: <http://dfrs.org/ns/void#> .
50 @prefix wdr: <http://www.w3.org/2007/05/powder-s#> .
51 @prefix wdr: <http://www.w3.org/2003/01/geo/wgs84_pos#> .
52 @prefix wdr: <http://vocab.getty.edu/wdr/terms/> .
53 @prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
54 aat:300198841 a gvp:Subject, skos:Concept, gvp:Concept ;
55 rdfs:label "rhyta"es, "rhyta"bel-latn, "rhyta"es, "rhyton"es, "rhyton"bel-latn, "rhyton"es, "rhyton"bel-latn ;
56 rdfs:seeAlso <http://vocab.getty.edu/vow/AATFullDisplay?find=Logic&AND=Note&SubjectId=300198841> ;
57 dct:created "1991-10-02T00:00:00"^^xsd:dateTime ;
58 dct:modified "1998-12-03T00:00:00"^^xsd:dateTime, "2001-07-26T22:03:43"^^xsd:dateTime, "2004-0
59 skos:changeNote aat_rev:5000057716, aat_rev:5001147623, aat_rev:5001147624, aat_rev:500114762
60 gvp:broaden aat:300198333, aat:300198865, aat:300194567 ;
61 gvp:broadenGenericExtended aat:300194507, aat:300197197, aat:300198938, aat:300197200, aat:300198710, aat:300198711, aat:300198712, aat:300198713, aat:300198714, aat:300198715, aat:300198716, aat:300198717, aat:300198718, aat:300198719, aat:300198720, aat:300198721, aat:300198722, aat:300198723, aat:300198724, aat:300198725, aat:300198726, aat:300198727, aat:300198728, aat:300198729, aat:300198730, aat:300198731, aat:300198732, aat:300198733, aat:300198734, aat:300198735, aat:300198736, aat:300198737, aat:300198738, aat:300198739, aat:300198740, aat:300198741, aat:300198742, aat:300198743, aat:300198744, aat:300198745, aat:300198746, aat:300198747, aat:300198748, aat:300198749, aat:300198750, aat:300198751, aat:300198752, aat:300198753, aat:300198754, aat:300198755, aat:300198756, aat:300198757, aat:300198758, aat:300198759, aat:300198760, aat:300198761, aat:300198762, aat:300198763, aat:300198764, aat:300198765, aat:300198766, aat:300198767, aat:300198768, aat:300198769, aat:300198770, aat:300198771, aat:300198772, aat:300198773, aat:300198774, aat:300198775, aat:300198776, aat:300198777, aat:300198778, aat:300198779, aat:300198780, aat:300198781, aat:300198782, aat:300198783, aat:300198784, aat:300198785, aat:300198786, aat:300198787, aat:300198788, aat:300198789, aat:300198790, aat:300198791, aat:300198792, aat:300198793, aat:300198794, aat:300198795, aat:300198796, aat:300198797, aat:300198798, aat:300198799, aat:300198800, aat:300198801, aat:300198802, aat:300198803, aat:300198804, aat:300198805, aat:300198806, aat:300198807, aat:300198808, aat:300198809, aat:300198810, aat:300198811, aat:300198812, aat:300198813, aat:300198814, aat:300198815, aat:300198816, aat:300198817, aat:300198818, aat:300198819, aat:300198820, aat:300198821, aat:300198822, aat:300198823, aat:300198824, aat:300198825, aat:300198826, aat:300198827, aat:300198828, aat:300198829, aat:300198830, aat:300198831, aat:300198832, aat:300198833, aat:300198834, aat:300198835, aat:300198836, aat:300198837, aat:300198838, aat:300198839, aat:300198840, aat:300198841, aat:300198842, aat:300198843, aat:300198844, aat:300198845, aat:300198846, aat:300198847, aat:300198848, aat:300198849, aat:300198850, aat:300198851, aat:300198852, aat:300198853, aat:300198854, aat:300198855, aat:300198856, aat:300198857, aat:300198858, aat:300198859, aat:300198860, aat:300198861, aat:300198862, aat:300198863, aat:300198864, aat:300198865, aat:300198866, aat:300198867, aat:300198868, aat:300198869, aat:300198870, aat:300198871, aat:300198872, aat:300198873, aat:300198874, aat:300198875, aat:300198876, aat:300198877, aat:300198878, aat:300198879, aat:300198880, aat:300198881, aat:300198882, aat:300198883, aat:300198884, aat:300198885, aat:300198886, aat:300198887, aat:300198888, aat:300198889, aat:300198890, aat:300198891, aat:300198892, aat:300198893, aat:300198894, aat:300198895, aat:300198896, aat:300198897, aat:300198898, aat:300198899, aat:300198900, aat:300198901, aat:300198902, aat:300198903, aat:300198904, aat:300198905, aat:300198906, aat:300198907, aat:300198908, aat:300198909, aat:300198910, aat:300198911, aat:300198912, aat:300198913, aat:300198914, aat:300198915, aat:300198916, aat:300198917, aat:300198918, aat:300198919, aat:300198920, aat:300198921, aat:300198922, aat:300198923, aat:300198924, aat:300198925, aat:300198926, aat:300198927, aat:300198928, aat:300198929, aat:300198930, aat:300198931, aat:300198932, aat:300198933, aat:300198934, aat:300198935, aat:300198936, aat:300198937, aat:300198938, aat:300198939, aat:300198940, aat:300198941, aat:300198942, aat:300198943, aat:300198944, aat:300198945, aat:300198946, aat:300198947, aat:300198948, aat:300198949, aat:300198950, aat:300198951, aat:300198952, aat:300198953, aat:300198954, aat:300198955, aat:300198956, aat:300198957, aat:300198958, aat:300198959, aat:300198960, aat:300198961, aat:300198962, aat:300198963, aat:300198964, aat:300198965, aat:300198966, aat:300198967, 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```

Our Journey to Linked Open Data (LOD)

- New JSON-LD profile uses the CIDOC-CRM ontology to provide a compact view of Vocabulary data suitable for semantic manipulation and framing
- Ties directly into Linked.art data model
- Licensing will change from ODC-By to CC0 in the future
- Click-through license agreement
- Expanding reconciliation tools: OpenRefine

OpenRefine Reconciliation Service, 2019

3.13 OpenRefine Reconciliation Service

[OpenRefine](#) (formerly Google Refine) is a popular and powerful tool for working with messy tabular data: cleaning it; transforming it (including to LOD); extending it with web services; linking it to structured databases. It was originally used for populating Freebase, then open sourced by Google. DERI created some [useful extensions](#): Reconcile & interlink, Export RDF. [LODRefine](#) is a repackaging of these extensions, adding reconciliation against DBpedia, Crowd-sourcing, and Statistics. It was popularized for use by GLAM professionals by Ruben Verborgh, Seth Holland and Max De Wilde through the sites <http://openrefine.org/> and <http://freeyourmetadata.org/>.

How can [GVP LOD be used as an OpenRefine](#) reconciliation service? The DERI extension includes a "SPARQL full-text search-based Reconciliation" that unfortunately cannot be used, because there's no way to specify that the `luc:term` index should be used (see [issue/33](#)). Nevertheless, one can use the GVP SPARQL service by querying for a fixed label (similar to [Find Subject by Exact English PrefLabel](#)), getting JSON format and parsing the result. Inge van Stokkom of the Rijksmuseum [worked out a detailed solution](#). We reproduce it here with a few changes. Assume you have NL labels and you want to look them up in AAT and fetch the AAT identifier and the EN `prefLabelGVP`:

- Create a column by fetching a URL based on the column that contains the terms

```
'http://vocab.getty.edu/sparql.json?query=select+distinct*{?x+skos:inScheme+aat;;(xl:prefLabel|xl:altLabel)/gvp:term"' + escape(value, 'url') + '"@nl}'
```

- Parse the JSON to obtain the URL:

```
value.parseJson().results.bindings[0].x.value
```

- Parse the identifier out of the URL by adding a column based on this column:

```
value[27,37]
```

- Use another query to fetch `prefLabelGVP`:

```
'http://vocab.getty.edu/sparql.json?query=select*where{?x+gvp:prefLabelGVP[skosxl:literalForm ?label];dc:identifier"' + escape(value, 'url') + '"}'
```

- Parse the JSON to obtain the label:

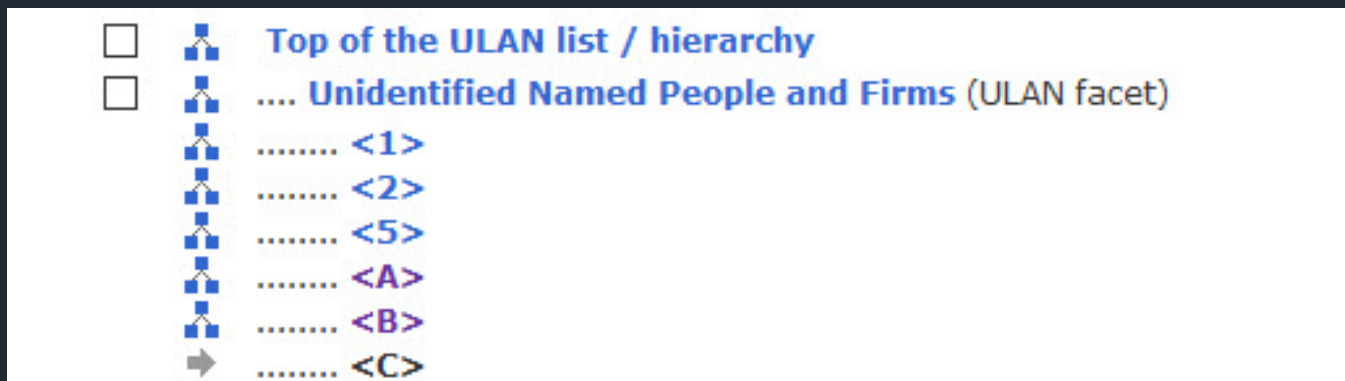
```
value.parseJson().results.bindings[0].label.value
```

See [Combination Full-Text and Exact String Match](#) for another variant of a query that may work better for reconciliation.

Our Journey to Linked Open Data (LOD)

Changes in Content – Expansions and Revisions

- “Unidentified Named People and Firms” (ULAN)



Conservation Terminologies in AAT and more

Terms:

architectural conservation (**preferred**, C, U, English-P, D, U, U)
conservation, architectural (C, U, English, UF, U, U)
conservation of buildings (C, U, English, UF, U, U)
architecture conservation and restoration (C, U, English, UF, U, U)
restoration of buildings (C, U, English, UF, U, U)
architecture conservation (C, U, English, UF, U, U)

 **waxing** (<protective processes and techniques>, <processes and techniques (hierarchy name)>)

 **Acryloid (TM)** (brand name materials, Brand Names (hierarchy name))

Note: Brand name of acrylic copolymer resins; subsumed in "Paraloid®" in 1997, to consolidate the disparate North American and European names used for the same products.

thermal analysis..... [GCI Preferred, VP Preferred]
 AATA database (2002-) 129699 checked 26 January 2012
 Art and Archaeology Technical Abstracts (1966-2000) Vol. 2, 273, and 80, 25, 2; IND 23 many
 **Candidate term** Candidate comment -- AVERY -- 6/98; revise scope note to broaden meaning
 CDMARC Subjects: LCSH (1988-)
 Champion, Dictionary of Terms and Techniques in Archaeology (1980)
 Grove Dictionary of Art (1996) Vol. 30, 401
 NASA Thesaurus (1988)


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AATA Online is a comprehensive database of over 145,000 abstracts of literature related to the preservation and conservation of material cultural heritage. AATA now includes selected subject-specific bibliographies produced as part of the Getty Conservation Institute's own conservation and scientific research projects or as part of specific collaborative projects in which the Institute is involved.

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- April 2019 quarterly update now available!**
- New GCI Project Bibliography: Conserving Concrete Heritage: An Annotated Bibliography**

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Conservation Terminologies in AAT

GCI analyzed content – led to AAT contribution

First major AAT change:
Brand Names hierarchy

- ☐  brand name materials
- ☐ Acryloid (TM)
- ☐ Agfacolor (TM)
- ☐ Araldite (TM)
- ☐ Arches paper (R)
- ☐ Arjomari paper (R)
- ☐ Art Sorb (TM)
- ☐ Beaverboard (TM)
- ☐ BEVA 371 (TM)
- ☐ Carbopol (TM)
- ☐ Carrara structural glass (TM)
- ☐ Celotex (TM)
- ☐ Corrosion Intercept (TM)
- ☐ CSC Book Saver (TM)
- ☐ Day-Glo (TM) (pigments)
- ☐ Delrin (TM)
- ☐ Devcon (TM)
- ☐ Dralon (R)
- ☐ Dulux (TM)

Conservation Terminologies in AAT

Second major AAT change:

Inclusion of more “compound terms”

☐	→	 electronic imaging
☐	⌵	 digital imaging
☐		 high dynamic range imaging
☐		 hyperspectral imaging
☐		 reflectance transformation imaging
☐		 satellite imagery
☐		 structured light scanning
☐		 texture mapping
☐		 multispectral imaging
☐		 terrestrial laser scanning
☐		 visible-induced luminescence imaging



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Conservation Terminologies in AAT

Third major AAT change:
Expansion of terms in hierarchies

- ☐  Top of the AAT hierarchies
- ☐  Activities Facet
- ☐  Processes and Techniques (hierarchy name)
- ☐  <processes and techniques by specific type> 
- ☐  analysis and testing techniques
- ☐  accelerated aging
- ☐ microfideometry
- ☐  assaying
- ☐  immunoassaying
- ☐ attenuated total reflectance
- ☐ building inspection
- ☐  chemical analysis
- ☐ elemental analysis
- ☐  microanalysis (chemical analysis)
- ☐ qualitative analysis
- ☐  quantitative analysis
- ☐  trace element analysis
- ☐  chromatography
- ☐ electrochromatography
- ☐  gas chromatography
- ☐ ion-exchange chromatography
- ☐  liquid chromatography
- ☐ micellar electrokinetic chromatography [N]
- ☐ paper chromatography
- ☐ size exclusion chromatography
- ☐ thin layer chromatography

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Conservation Terminologies in AAT

Third major AAT change:
Expansion of terms in hierarchies

☐		 endoscopy
☐		 videoendoscopy
☐		 finite element method
☐		 flash photolysis
☐		 flash thermography
☐		 flat-jack testing
☐		 fractography
☐		 graphology
☐		 impact-echo
☐		 interferometry
☐		 electronic speckle pattern interferometry
☐		 holographic interferometry
☐		 laser Doppler vibrometry
☐		 shearography
☐		 ion beam analysis
☐		 nuclear reaction analysis
☐		 Rutherford backscattering spectroscopy
☐		 liquid scintillation counting
☐		 mammography
☐		 mass spectrometry
☐		 accelerated mass spectrometry
☐		 evolved gas analysis
☐		 gas chromatography-mass spectrometry [N]
☐		 ion scattering spectroscopy
☐		 pyrolysis mass spectrometry
☐		 secondary ion mass spectrometry
☐		 secondary neutral mass spectrometry
☐		 thermal ionization mass spectrometry
☐		 time-of-flight mass spectrometry
☐		 measuring
☐		 calorimetry
☐		 counting
☐		 dating (measuring process)
☐		 densitometry
☐		 diffractometry
☐		 dilatometry
☐		 dosimetry
☐		 fluorimetry
☐		 hygrometry

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Conservation Terminologies in AAT

Third major AAT change:
Expansion of terms in hierarchies

☐	→	 <plastic by property>	
☐	⌵	 thermoplastic	
☐		 acetal (thermoplastic)	
☐	⌵	 acrylic (resin)	
☐		 acrylonitrile-butadiene-styrene copolymer	
☐		 butyrate	
☐	⌵	 cellulosic	
☐		 cyanoacrylate [N]	
☐		 fluoroplastic	
☐		 furan	
☐		 ionomer polymer	
☐		 phenylene-based resin	
☐		 polyacrylonitrile	
☐	⌵	 polyamide	
☐		 polybutylene	
☐		 polycarbonate	
☐		 polyetherimide	
☐	⌵	 polyethylene	
☐		 polypropylene	
☐		 polystyrene	
☐	⌵	 shellac [N]	
☐		 styrene-acrylonitrile	
☐		 sulfone polymer	
☐	⌵	 vinyl	
☐	⌵	 thermoset	
☐	⌵	 alkyd resin	
☐		 allyl resin	
☐	⌵	 amino resin	
☐		 casein plastic	
☐	⌵	 epoxy resin	
☐	⌵	 phenolic	
☐		 polyvinylidene chloride	
☐		 silicone	

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Conservation Terminologies in AAT

Third major AAT change: **Expansion of terms in hierarchies**

- Terms for objects or works
- Physical characteristics
- Styles used and time periods
- Materials and products for preservation
- Conservation and preservation activities
- Techniques for conservation
- Methodologies and principles
- =AAT

AAT : Requirements for Contributions

- **Preferred term** with three valid scholarly sources
- **Hierarchical placement** of the term (parent)
- Descriptive note, with source(s)
- What are we missing?

Required fields

Each record must include a term and a position in the hierarchy. A scope note is also required for all new records:

- a numeric ID identifies the record uniquely (IDs are assigned by the system)
- a parent (you create the link to a parent by designating the correct level with the mark "DOM" (for *dominant*) when you create or move a record)
- preferred term (a descriptor in English is the minimum requirement)
- [alternate descriptor, where mandated; see Guidelines]
For each term:
 - various associated flags (generally automatically assigned)
 - sources for the term
 - language of the term
 - contributor of the term (automatically assigned by VCS)
- scope note
 - sources for the scope note
 - language of the scope note
 - contributor of the scope note (automatically assigned)
- Additional fields, including the Associative Relationships, may be included as time and editorial priorities allow.

AAT : New Submissions

- AATA Online verifies and researches each term for submission
-or holds for continued warrant (“conservation in action”)

Terms:

flat-jack testing (**preferred**,C,U,English-P,D,U,VN)

flat jack testing (C,U,English,UF,U,U)

flat-jack test (C,U,English,UF,U,U)

testing, flat-jack (C,U,English,UF,U,U)

flat-jack testing..... [VP Preferred]

..... AATA online (2002-)

..... Andreini, et al. Mechanical Characterization of Masonry Walls with Chaotic Texture (2000)

..... Gregorczyk and Lourenço. A Review on Flat-Jack Testing (2000)

AAT : Multilingual Submissions

- 15,000 French terms (2019)
- 5,000 Chinese and transliterated Chinese concepts (2018)
- 1,200 Dutch concepts (2018)

New Submissions: TGN and ULAN

- AATA Online also submits conservation-related places/names to TGN and ULAN

11. ☐  **Gaochang** (deserted settlement)
(World, Asia, China, Xinjiang) [6003062]

高昌
哈拉和卓
霍州
قاراھوجا
Chotscho
Gao-chang
Gaochang guo
Halahezhuo
Huo Zhou
Kara-Khoja
Khara-Khoja
Khocho
Qarahoja
Qara-Hoja
Qocho
Qocho

 **Can Sadurní (abandoned dwelling)**

Coordinates:

Lat: 41 20 42 N *degrees minutes* Lat: 41.3453 *decimal degrees*
Long: 001 54 43 E *degrees minutes* Long: 1.9123 *decimal degrees*

Names:

Can Sadurní (**preferred**,C,V)
Can Sadurní, Cova de (C,V)
Cova de Can Sadurní (C,V)

☐  **Dutch East Indies** (former territory/colony/dependent state)
(World, Asia) [8711651]

Nederlandsch-Indië
Nederlands Oost-Indië
Netherlands East Indies
Netherlands Indies

 **Calakmul (deserted settlement)**

Coordinates:

Lat: 18 06 21 N *degrees minutes* Lat: 18.1062 *decimal degrees*
Long: 089 48 36 W *degrees minutes* Long: -89.8105 *decimal degrees*

Note: Ancient Maya city set in the forest of the Tierra Bajas. Valued for large structures, stelae, and well-preserved city plans that offer a characteristic representation of Maya life; designated a World Heritage Site by UNESCO in 2002. The oldest inscribed date for the site is 431 CE, but it was inhabited before 200 BCE. It was a major Maya power within the northern Petén region of the Yucatán of southern Mexico; maintained an intense rivalry with the major city of Tikal to the south. Contains hieroglyphic inscriptions.

What next?

- Continuing translations with our partners in our International Terminology Working Group
- Identifying areas that need fleshing out or even hierarchical change (musical instrument classification)
- Adding publicly available data sets (Pleiades)

Links to Getty Vocabulary Program Resources

Editorial Guidelines

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

SPARQL endpoint

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

Legacy XML Web Services

http://www.getty.edu/research/tools/vocabularies/vocab_web_services.pdf

OpenRefine Tool

(http://vocab.getty.edu/queries#OpenRefine_Reconciliation_Service)



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