Requirements for Visualization and Indexing of Museum Content

Regine Stein

Philipps-Universität Marburg – Bildarchiv Foto Marburg

(UNIMAR)

1. Current state in Europeana

   – Visualization

   – Indexing

2. What is needed: a bit of theory

3. Current approach in Athena Plus

4. Museum-specific requirements

1. **Current state in Europeana**

   – Visualization

   – Indexing

2. What is needed: a bit of theory

3. Current approach in Athena Plus

4. Museum-specific requirements

Villa Dürckheim (Äußeres - Nordfassade von Norden)

Alternative Title:
Palais Dürckheim

Creator:
Henry van de Velde, van de Velde, Henry, Henry Clemens van de Velde (Henry van de Velde; van de Velde, Henry; Henry Clemens van de Velde) To: 1957-10-25+02:00 Date of birth: 1863-04-03+02:00 Date of death: 1957-10-25+02:00; Velde, Henry van de (Velde, Henry van de)

Contributor:
Dürckheim-Montmartin, Friedrich von (Graf)

Date:
1928; Part of: 2 quarter of the 20th century; From: 01-01-1928 — To: 31-12-1928; 1935; Part of: Mid 20th century; From: 01-01-1935 — To: 31-12-1935; 1938; Part of: Mid 20th century; From: 01-01-1938 — To: 31-12-1938; 1945; Part of: Mid 20th century; From: 01-01-1945 — To: 31-12-1945; 2006/2007

Date of creation:
1912/1913

Type:
Wohn- und Bürohaus; Architektur (Bauwerk); Architecture; Art Nouveau; arkitektur; Baukunst (Objektgattung); Art Nouveau

Format:
verputzt

Identifier:
obj/32057917-fmd471220

Rights:
Foto: Gaasch, Uwe

Provenance:
Weimar, Cranachstraße 47

```
<lido:eventSet>
  <lido:event>
    <lido:eventType>
      <lido:conceptID
        lido:source="http://terminology.lido-schema.org/eventType" lido:type
      <lido:term xml:lang="en">Modification</lido:term>
    </lido:eventType>
    <lido:eventDate>
      <lido:displayDate>ab 1945</lido:displayDate>
      <lido:date>
        <lido:earliestDate>1945</lido:earliestDate>
        <lido:latestDate>1945</lido:latestDate>
      </lido:date>
    </lido:eventDate>
  </lido:event>
</lido:eventSet>
<lido:eventSet>
  <lido:event>
    <lido:eventType>
      <lido:conceptID
        lido:source="http://terminology.lido-schema.o
      <lido:term xml:lang="en">Restoration</lido:term
    </lido:eventType>
    <lido:eventDate>
      <lido:displayDate>2006-2007</lido:displayDate>
      <lido:date>
        <lido:earliestDate>2006</lido:earliestDate>
        <lido:latestDate>2007</lido:latestDate>
      </lido:date>
    </lido:eventDate>
  </lido:event>
</lido:eventSet>
```

```
                        xmlns:rdf="http://www.w3.com/rdf/011/
<edm:ProvidedCHO rdf:about="http://mint-projects.image.ntua.gr/Partage_Plus/Pro
  <dc:contributor xml:lang="de">Dürckheim-Montmartin, Friedrich von (Graf)</dc
  <dc:creator rdf:resource="http://partage.vocnet.org/part-kue04030021"/>
  <dc:creator xml:lang="en">Velde, Henry van de</dc:creator>
  <dc:date>1928</dc:date>
  <dc:date>1935</dc:date>
  <dc:date>1938</dc:date>
  <dc:date>1945</dc:date>
  <dc:date>2006/2007</dc:date>
  <dc:format rdf:resource="http://vocab.getty.edu/aat/300053864"/>
  <dc:format>verputzt</dc:format>
  <dc:identifier>obj/32057917-fmd471220</dc:identifier>
  <dc:rights>Foto: Gaasch, Uwe</dc:rights>
  <dc:title xml:lang="de">Villa Dürckheim (Äußeres - Nordfassade von Norden)</
  <dc:type rdf:resource="http://vocab.getty.edu/aat/300257729"/>
  <dc:type rdf:resource="http://vocab.getty.edu/aat/300007043"/>
  <dc:type rdf:resource="http://partage.vocnet.org/part00151"/>
  <dc:type xml:lang="de">Wohn- und Bürohaus</dc:type>
  <dc:type xml:lang="de">Architektur (Bauwerk)</dc:type>
  <dc:type rdf:resource="http://partage.vocnet.org/part00353"/>
  <dc:type xml:lang="de">Architektur</dc:type>
  <dc:type xml:lang="de">Art Nouveau</dc:type>
  <dcterms:alternative xml:lang="de">Palais Dürckheim</dcterms:alternative>
  <dcterms:created>1912/1913</dcterms:created>
  <dcterms:provenance>Weimar, Cranachstraße 47</dcterms:provenance>
  <edm:type>IMAGE</edm:type>
```

Villa Dürckheim (Äußeres - Nordfassade von Norden)

Rights Reserved - Free Access

View item at
Bildarchiv Foto Marburg ↗

W   Cite on Wikipedia

文₄   Translate details

Select language ▾

Powered by **Microsoft**® Translator

Alternative Title:
Palais Dürckheim

Creator:
Henry van de Velde, van de Velde, Henry, Henry Clemens van de Velde (Henry van de Velde; van de Velde, Henry; Henry Clemens van de Velde) To: 1957-10-25+02:00 Date of birth: 1863-04-03+02:00 Date of death: 1957-10-25+02:00; Velde, Henry van de (Velde, Henry van de)

Contributor:
Dürckheim-Montmartin, Friedrich von (Graf)

Date:
1928; Part of: 2 quarter of the 20th century; From: 01-01-1928 — To: 31-12-1928; 1935; Part of: Mid 20th century; From: 01-01-1935 — To: 31-12-1935; 1938; Part of: Mid 20th century; From: 01-01-1938 — To: 31-12-1938; 1945; Part of: Mid 20th century; From: 01-01-1945 — To: 31-12-1945; 2006/2007

Date of creation:
1912/1913

Type:
Wohn- und Bürohaus; Architektur (Bauwerk); Architecture; Art Nouveau; arkitektur; Baukunst (Objektgattung); Art Nouveau

Format:
verputzt

Identifier:
obj/32057917-fmd471220

Rights:
Foto: Gaasch, Uwe

Provenance:
Weimar, Cranachstraße 47

http://www.europeana.eu/portal/record/2026116/Partage_Plus_ProvidedCHO_Bildarchiv_Foto_Marburg_obj_32057917_fmd471220.html

Search ⌄ architecture   🔍 Search   Help

Results per page: 24 ⌄   Results 1 - 24 of 1,627,022   1   of 67793 > >>

Matches for:

architecture   ❌

☐ Translate search terms
Setup translation

Refine your results:

▾ Add more keywords

[   ] + Add

▸ By media type

▸ By language of description

▸ By year

▸ By providing country

▸ Can I use it?

▸ By copyright

▸ By provider

▾ By data provider

☐ Ministère de la culture et de
   la communication,
   Médiathèque de
   l'architecture et du
   patrimoine (511537)
☐ Bildarchiv Foto Marburg
   (421209)

House balcony in Dingli 🖾

Facades of a Domestic
building in Dingli... 🖾

Rural building in Dingli 🖾

Domestic building
(facade) in Dingl... 🖾

Zurrieq Church 🖾

Church of St James the
Apostle, Zurrieq 🖾

St Dominic's Church
(Vittoriosa) 🖾

Hints on ornamental
gardening : cons... 📄

Specimen of carving of

Domestic building in

Rural architecture in

Rural architecture in

Matches for:

architecture ❌
wohn und bürohaus ❌

☐ Translate search terms
Setup translation

Refine your results:

▾ Add more keywords

[   ] **+ Add**

▾ By media type

☐ IMAGE (21)

▸ By language of description

▸ By year

▸ By providing country

▸ Can I use it?

▸ By copyright

▸ By provider

▾ By data provider

☐ Bildarchiv Foto Marburg (20)
☐ Deutsche Fotothek (1)
☑ Include content contributed by users

Share:

Haus der Bauarbeiter im neuen Zentru...

Wohn- und Bürohaus (Wohn und Büro...

Wohn- und Bürohaus

ehemalige Ronneburgsche ...

ehemalige Ronneburgsche ...

Wohn- und Bürohaus (Ansicht von We...

Wohn- und Bürohaus

Wohn- und Bürohaus (Straßenseite mi...

Wohn- und Bürohaus (Hofseite)

Wohn- und Bürohaus

Unbekannt

Villa Dürckheim (Äußeres - Südf...

Villa Dürckheim

Villa Dürckheim

Villa Dürckheim

Villa Dürckheim

Issues

- **Visualization**
  - Display of ALL information – no distinction between indexing and display
  - No distinction between information coming from the content provider and automatically enriched information
  - No possibility to display uncertainty
  - No possibility to transmit type of contribution, roles, extent

- **Indexing**
  - Only "administrative" facets available
  - No browsing aids for the user in terms of content

1. Current state in Europeana

   – Visualization

   – Indexing

2. **What is needed: a bit of theory**

3. Current approach in Athena Plus

4. Museum-specific requirements

Purpose of indexing

"Give end-users consistent, reliable access to information" (CDWA)

Users want to retrieve

- **all** documents in an information system that match the search request, without any information loss (recall)

- **only** documents in an information system that match the search request, without any unwanted results (precision)

Recall and precision are measures for the quality of information retrieval.

The quality of "retrieval of documents relies heavily on the quality of their representation. If the documents are represented poorly or inadequately, the quality of the searching will likewise be poor". Mai 2000, 270

Precision is getting more and more important in the context of large-scale aggregation of metadata.

Factors which affect recall and precision

- Recall is decreased by

  - synonyms occuring in natural language
    => use controlled vocabularies employing synonym control

  - low exhaustivity – too few indexing terms assigned
    => consider rules or procedures for more in-depth indexing

  - inconsistent indexing – dissimilar indexing of similar objects
    => consider supervised training of indexers or machine aided feedback

- Precision is counteracted by

  - homonyms occuring in natural language
    => use controlled vocabularies employing homonym control

  - low indexing specificity – specific indexing terms are missing
    => follow the basic rule of indexing the most specific term

  - broadly related descriptors as indexing terms
    => apply the most specific term, do not add broader terms from a hierarchy chain

Main principle of indexing

A more recent challenge is to harmonise collection-specific rules with the requirements arising from large-scale aggregation of metadata.

One general indexing priniciple is true for all kinds of documents:

"The single most important principle of subject indexing [...] is that a topic should be indexed under the most specific term that entirely covers it. Thus, an article discussing the cultivation of oranges should be indexed under *oranges* rather than under *citrus fruits* or *fruit*." Stock, 350

This main principle applies to all kinds of "documents" and to values of all types of descriptive metadata, such as

- the LIDO element *Object/Work Type*

- and ALL LIDO elements referring to concepts.

LIDO — Lightweight Information Describing Objects

Terms:

architecture (object genre) (preferred,C,U,English-P,D,U,PN)
architectuur (objectgenre) (C,U,Dutch-P,D,U,U)
Architektur (Objektgattung) (C,U,German-P,D,SN)
arquitectura (categoría de objeto) (C,U,Spanish-P,D,U,SN)

Facet/Hierarchy Code: V.PE

Hierarchical Position:

- Objects Facet
- .... Object Genres (Hierarchy Name) (G)
- .... object genres (object classifications) (G)
- .... architecture (object genre) (G)

- Top of the AAT hierarchies
- .... Objects Facet
- .... Built Environment (Hierarchy Name)
- .... Single Built Works (Hierarchy Name)
- .... single built works (built environment)
- .... <single built works by specific type>
- .... <single built works by function>
- .... office buildings
- .... <office buildings by form>
- .... office towers
- .... <office buildings by function>
- .... administration buildings
- .... corporate headquarters (built works)
- .... corporate plazas
- .... government office buildings [N]
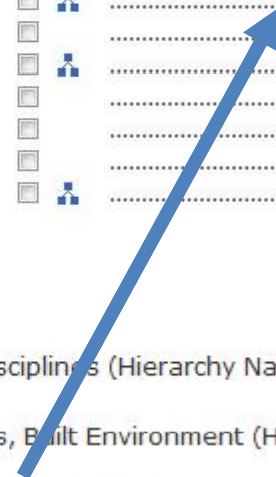
Related concepts:

distinguished from .... **architecture (discipline)**
.... (visual arts, arts (broad discipline), ... Disciplines (Hierarchy Name)) [300054156]
meaning/usage overlaps with .... **complexes (buildings)**
.... (Built Complexes and Districts, Built Environment (Hierarchy Name)) [300000202]
meaning/usage overlaps with .... **single built works (built environment)**
.... (Single Built Works (Hierarchy Name), Built Environment (Hierarchy Name)) [300004790]

Indexing the specific term presupposes broader terms to be automatically added as search entries (not as indexing terms!) to assure retrieval of the specifically indexed item when using the broader term for search.

1. Current state in Europeana

    –   Visualization

    –   Indexing

2. What is needed: a bit of theory

3. Current approach in Athena Plus

4. Museum-specific requirements

Mandatory elements focused on Europeana

Core Elements for the Delivery of Metadata to Europeana

Mandatory elements

➢ **Metadata language**

➢ **Europeana type**

➢ **Object / Work Type**

➢ **Object Title**

➢ **Record Information:**
Record ID - Record Type - Record Source - Record Info link

➢ **Resource Information / Visual Surrogates**
Link DCHO (Master) - Link DCHO (Thumbnail) - Rights Resource

1. Current state in Europeana

   – Visualization

   – Indexing

2. What is needed: a bit of theory

3. Current approach in Athena Plus

4. Museum-specific requirements

ATHENA PLUS
Access to cultural heritage networks for Europeana

LIDO
Lightweight Information Describing Objects

More mandatory elements!

Overview of the LIDO Metadata Elements – Mandatory | Mandatory if applicable | Recommended

Mandatory elements
These elements are mandatory in each metadata record and the information is used for browsing the objects in a museum-specific portal
Metadata language Object / Work Type Classification Object Title Location Event Information
Record Information Resource Set

Mandatory if applicable elements
These elements are mandatory if applicable for the described object and the information is used for browsing the objects in a museum-specific portal
Repository Name
Event Information -> Actor Cultural Context Date Period Place Material / Technique
Subject Information -> Theme-Concept Actor Date Place

Recommended elements
These elements are recommended if applicable and the information is used for displaying the object information in a museum-specific portal
Inventory Number Object Description Object Measurement
Event Information -> Event Name Actor->Role Actor->Attribution Actor->Extent Method Material/Technique->Extent
Subject Information -> Extent Subject
Related Works
Rights Work
Resource Set -> Date Taken Creator of Resource Resource Description

More specified vocabulary links!

Use Getty vocabularies wherever possible – most appropriate, most elaborate and most sustainable source!

- AAT for
  - Object / Work Type and CH type classification
  - Cultural context
  - Periods
  - Materials and Techniques

- ULAN (second best: VIAF) for
  - Repository Name
  - Event Actor and Subject Actor

- TGN for
  - Repository Location
  - Event Place and Subject Place

Mandatory vocabulary links!!

- Cultural Heritage Type: AAT Facet Codes

- Thematic Context: UDC Summary

- Repository Location: TGN nations for the "part of" relation

- Event Type: LIDO Event types

- Event Place : TGN nations for the "part of" relation

Mandatory vocabulary links!!

- Cultural Heritage Type: AAT Facet Codes
  -> http://www.getty.edu/research/tools/vocabularies/aat/AATFacetPopup.html

Built Environment

V.RD	Settlements and Landscapes
V.RG	Built Complexes and Districts
V.RK	Single Built Works
V.RM	Open Spaces and Site Elements

Furnishings and Equipment

V.TC	Furnishings
V.TE	Costume
V.TH	Tools and Equipment
V.TK	Weapons and Ammunition
V.TN	Measuring Devices
V.TQ	Containers
V.TT	Sound Devices
V.TV	Recreational Artifacts
V.TX	Transportation Vehicles

Visual and Verbal Communication

V.VC	Visual Works
V.VK	Exchange Media
V.VW	Information Forms

ATHENA PLUS
Access to cultural heritage networks for Europeana

LIDO
Lightweight Information Describing Objects

Mandatory vocabulary links!!

- Thematic Context: UDC Summary
  -> http://udcdata.info/064676

UDC Summary Linked Data

URI	http://udcdata.info/064676
Notation	7
Caption	THE ARTS. RECREATION. ENTERTAINMENT. SPORT
Application Note	Denote exhibition catalogues of art objects by (083) from Table 1d. Denote the work of particular a extension

Broader class	---- MAIN TABLES	
Narrower classes	7.01/.09	Special auxiliary subdivision for the arts
	71	Physical planning. Regional, town and country planning. Landscapes, parks, gardens
	72	Architecture
	73	Plastic arts
	74	Drawing. Design. Applied arts and crafts
	75	Painting
	76	Graphic art, printmaking. Graphics
	77	Photography and similar processes
	78	Music
	79	Recreation. Entertainment. Games. Sport

- Provide appropriate grouping and order of information

- Display actor roles, attribution and uncertainty of information

- Allow for display values so that providers can take control how their items are displayed, particularly use the following display elements as they include information about uncertainty:

  - objectMeasurementsSet -> displayObjectMeasurements

  - eventActor -> displayActorInRole

  - eventDate -> displayDate

  - eventPlace -> displayPlace

  - eventMaterialsTech -> displayMaterialsTech

Further functionalities

- Allow provider to set order (-> @lido:sortorder) so that providers can e.g. control order of appearance of artists – very important for art museums.

- Display events according to an ordering on event type vocabulary

- Allow for multiple digital resources with related information: description, creator (photographer), date taken, rights

- Practical Mapping Exercise -