Lightweight Information Describing Objects

An introduction

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1. Background

2. LIDO Schema Design

3. LIDO Mapping Overview
1. Background

2. LIDO Schema Design

3. LIDO Mapping Overview
Background

The broad view standards

Collections of History / Cultural History

Art Collections

Archaeological Collections

Ethnological Collections

Architecture

...
Standards are needed for integrating and exchanging information between institutions
Standards are fundamentally facilitating cooperation.
CIDOC-CRM / ISO 21127 in less than a nutshell…

• Developed within CIDOC, the Documentation Committee of the International Council of Museums (ICOM)

• Is a formal domain ontology for cultural heritage information:
  – Describes the things that the cultural heritage sector deals with and how these things relate to each other
  – Expressed as an “object-oriented” schema
  – Not a metadata standard
  – No fixed technical format

Reference: CIDOC-CRM / ISO 21127
“The primary role of the CRM is to serve as a basis for mediation of cultural heritage information and thereby provide the semantic ’glue’ needed to transform today’s disparate, localised information sources into a coherent and valuable global resource.”

Nick Crofts
The broad view standards

Reference: CIDOC-CRM / ISO 21127
Why a standard format for contributing content?

Collection Management Systems:
Adlib, APS, digiCULT.web, easyDB, Faust, First Rumos, GOS, Hida, Imdas, MuseumPlus, TMS, Musketti, Muusa, E-kuva, Memoron, ...

Union Catalogues and Portals
BAM, Bildindex, museum-digital, Museumsportal Nord, Museumsportal Saarland, ...

Communication between cataloguers and builders of cultural heritage systems
Why a standard format for contributing content?

- Increasing relevance of internet presence for museums and other collections
- Increasing necessity to integrate your data into union catalogues and portals: facilitate resource discovery in a cross-collection and even cross-sectoral (archives, libraries, museums) manner
- Increasing requests to make your information available for the Semantic Web / Linked Data initiatives
Why a standard format for contributing content?

• It’s all about
  – creating a consistent information base
  – making your information understandable outside of your collection database / your home context!

• Need for convenient instruments to provide cultural collection information
  – from different collections / object classes
  – from different data structures
  – from different software systems
Background

The broad view of standards

- **LIDO elements**
- **LIDO XML**
- **Iconclass**
- **GND**

**Metadata structure standards**
- schemes or element sets

**Metadata encoding standards**
- for machine readability, communication, and exchange

**Metadata presentation standards**
- for display / presentation to users

**Metadata content standards**
- rules, guidelines, best practices for element content

**Metadata value standards**
- controlled vocabularies for the values of elements

*Metadata elements = tags = fields*

*Metadata is bibliographic data is one kind*

https://pantherfile.uwm.edu/ml/ww/resource.html
LIDO – Lightweight Information Describing Objects

- Is the result of a collaborative effort of international stakeholders in the museum sector to create a common solution for contributing cultural heritage content to web applications.

- Provides an explicit format to deliver (museum’s) object information in a standardized way.
Background

The broad view standards

2006
The harvesting format CDWA Lite is published

2007
Generalization into museumdat to be applicable for all kinds of objects

2008
CDWA Lite / museumdat Working Group: Aims at establishing one common, single schema

2009
ATHENA Project: SPECTRUM community joins CIDOC Working Group established

2010
LIDO v1.0 Release during ICOM-CIDOC Conference
What is LIDO

LIDO v1.0 has been released at CIDOCs 2010 annual meeting in Athens, November 8th–10th!

- LIDO v1.0 XML Schema Definition: www.lido-schema.org/v1.0/lido-v1.0.xsd
- LIDO v1.0 HTML Reference: www.lido-schema.org/v1.0/lido-v1.0-schema-reference.html
- LIDO Example Records: Example 1: La Primavera | Fontana del Moro
- LIDO Introduction Slides: www.lido-schema.org/docs/lido-introduction.pdf

Erin Coburn,
Richard Light, Gordon McKenna,
Regine Stein, Axel Vitthum

November 2010
1. Background

2. LIDO Schema Design

3. LIDO Mapping Overview
Purpose

Why

Collections of History / Cultural History

Collections of Technical History

Art Collections

Collections of Natural History

Archaeological Collections

Geological / Mineralogical Collections

Ethnological Collections

Coin Collections

Architecture

Photography Collections

...

...
XML Schema for Contributing Content to Cultural Heritage Repositories

- For delivering metadata, for use in a variety of online services, from an organization’s online collections database to portals of aggregated resources – as well as exposing, sharing and connecting data on the web.
- Intended to represent the full range of descriptive information about museum objects, e.g. art, cultural, technology and natural science.
- It supports multilingual environments.
Key concepts
- Maximum detail
- Preservation (of data)
- Domain specific schemes
- Country specific schemes;
- Organisation specific schemes

Key concepts
- Cross-domain (probably)
- Usable quality
- Reasonable speed of delivery
- Rights protection

Key concepts
- Cross-domain
- Maximum relevance of results
- Speed of choosing relevant resource
• Provide a specification and related XML schema that describes cultural materials appropriately

• Individual data providers can decide on how light – or how rich – they want their contributed metadata records to be

• Allow for delivering data and resources / digital surrogates relating to your objects

• Include links from contributed metadata back to records in their ’home’ context
Cont.: 

- Allow for delivery of full information: a record can include all the necessary information for display and retrieval of your object.

- Allow for identification of each referenced entity, e.g. provide references to controlled vocabulary and authority files.

- Provide optimised metadata for retrieval on one hand and for display on the other -> distinction of display and indexing elements.
Descriptive and administrative information groups in LIDO

- **Object Classifications** –
  - **Object / Work Type** *(mandatory)*
  - Classification
  - **Object Identifications** –
    - **Title / Name** *(mandatory)*
    - Inscriptions
  - Repository / Location
  - State / Edition
  - Object Description
  - Measurements

- **Events** –
  - Event Set
  - **Relations** –
    - Subject Set
    - Related Works

- **Administrative Metadata** –
  - Rights
  - **Record** *(mandatory)*
  - Resource
Schema Design

**Mandatory elements**

- **LIDO Record Identifier**
- **Object Classifications**
  - **Object / Work Type** *(mandatory)*
  - Classification
  - **Object Identifications**
- **Title / Name** *(mandatory)*
  - Inscriptions
  - Repository / Location
  - State / Edition
  - Object Description
  - Measurements

- **Events**
  - Event Set
  - **Relations**
  - Subject Set
  - Related Works
  - **Administrative Metadata**
    - Rights
    - **Record** *(mandatory)*
    - Resource
Full support of multilinguality

- Language attribute is mandatory for default language on high-level elements descriptiveMetadata and administrativeMetadata

Two possibilities to provide multi-lingual entries:

- Repeat the high-level elements with different language attributes for fully multi-lingual resources

or

- Repeat text-level elements with different language attributes for providing translations only for just a few elements
• Identifiers are repeatable

• Entities including an identifier el.:
  - Concept
  - Actor / Legal Body Ref
  - Place
  - Event
  - Object

• Example:

Display and Index elements – basic structure:

- `xxxWrap (0-1)`
  - `xxxSet (0-unbounded)`
    - `displayXXX (0-unbounded)` (for language variants only)
  - `XXX (0-1)`

E.g.

```
objectMeasurementsWrap
objectMeasurementsSet
displayObjectMeasurements
objectMeasurements
```

```
objectMeasurementsSet
  displayObjectMeasurements: 44,3 x 35,4 cm (Blatt); 10 Bildfelder
  objectMeasurements
    measurementsSet: (value: 44,3) (unit: cm) (type: Höhe)
    measurementsSet: (value: 35,4) (unit: cm) (type: Breite)
    extentMeasurements: Blatt
```
1. Background

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- **Object Classifications** –

**Object / Work Type** *(mandatory)*

**Classification**

- **Object Identifications** –

**Title / Name** *(mandatory)*

Inscriptions

Repository / Location

State / Edition

Object Description

Measurements

- **Events** –

Event Set

- **Relations** –

Subject Set

Related Works

- **Administrative Metadata** –

Rights

Record *(mandatory)*

Resource
Definition: The specific kind of object / work being described.

How to record: Preferably taken from a published controlled vocabulary. For a collection, include repeating instances for identifying all of or the most important items in the collection.
**Definition:** Concepts used to categorize an object / work by grouping it together with others on the basis of similar characteristics.

**How to record:** The category belongs to a systematic scheme (classification) which groups objects of similar characteristics according to uniform aspects. This grouping / classification may be done according to material, form, shape, function, region of origin, cultural context, or historical or stylistic period. In addition to this systematic grouping it may also be done according to organizational divisions within a museum (e.g., according to the collection structure of a museum). If the object / work is assigned to multiple classifications, repeat this element. Preferably taken from a published controlled vocabulary.
objectWorkType: Mineral

classification: Malachit
type: Mineral systematic
classification: Azurit
type: Mineral systematic
- Event Set
  - Relations –
  Subject Set
  Related Works

- Administrative Metadata –
  Rights
  Record (mandatory)
  Resource

- Object Classifications –
  Object / Work Type (mandatory)
  Classification

- Object Identifications –
  Title / Name (mandatory)
  Inscriptions
  Repository / Location
  State / Edition
  Object Description
  Measurements
title
Ruine der Petri-Kirche nach Sprengung des südwestlichen Seitenschiffendes

inscription
type Signatur
inscriptionTranscription
C. Laeisz.

inscriptionDescription
type: Beschreibung
descriptiveNoteValue:
unten rechts: "C. Laeisz.", handgeschrieben
objectWorkType: Gemälde

title: „Hohe Wogen“
pref: preferred

objectDescriptionSet
type: Object history
descriptiveNote: „Wie alle reinen Meeresbilder ...“

objectMeasurementsSet
displayObjectMeasurements: H: 67 cm, B: 87 cm

objectMeasurements
measurementsSet
measurementType: height
measurementUnit: cm
measurementValue: 67

measurementsSet
measurementType: width
measurementUnit: cm
measurementValue: 87
objectWorkType: Gemälde

repository
repositoryType: current
repositoryName:

legalBodyID http://d-nb.info/gnd/2166186-8
legalBodyName Museumsberg Flensburg

workID: 23214
type: Inventarnummer
repositoryLocation: House 1, Room Nr. 5
isPartOf Museumsberg
isPartOf Flensburg

Designation and unambiguous identification of the institution of custody
exact Location
No artist? No creation date? No finding place?

Museum objects may relate to any actor, date, or place in two ways:

• The object was present at an event (such as creation, find, use, …)
  - having participants / carried out by some actors
  - at some time
  - in some place

or

• The object refers to such entity by
  - depicting it
  - „being about“
- Object Classifications –
  
  Object / Work Type *(mandatory)*
  
  Classification
  
  - Object Identifications –
    
    Title / Name *(mandatory)*
    
    Inscriptions
  
  Repository / Location
  
  State / Edition
  
  Object Description
  
  Measurements

- Events –

  Event Set

  - Relations –
    
    Subject Set
    
    Related Works

  - Administrative Metadata –
    
    Rights
    
    Record *(mandatory)*
    
    Resource
<table>
<thead>
<tr>
<th>Event Identifier</th>
<th>Event Type</th>
<th>Role in Event</th>
<th>Event Name</th>
<th>Event Actor</th>
<th>Culture</th>
<th>Event Date</th>
<th>Period</th>
<th>Event Place</th>
<th>Event Method</th>
<th>Materials / Technique</th>
<th>Thing Present</th>
<th>Event Related</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Herstellung / Production</td>
<td>Maler</td>
<td>La primavera / Der Frühling</td>
<td>Botticelli, Sandro</td>
<td>Florenz</td>
<td>1482</td>
<td></td>
<td>Florenz, Palazzo Medici Riccardi, Via Cavour</td>
<td>Florence</td>
<td>Tempera</td>
<td>Pappelholz</td>
<td>1982</td>
<td>Restaurierung / Restoration</td>
</tr>
</tbody>
</table>
- Event Identifier
- Event Type
- Role in Event
- Event Name
- Event Actor
- Culture
- Event Date
- Period
- Event Place
- Event Method
- Materials / Technique
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- Event Related
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Event

- Event Identifier
- Event Type
- Role in Event
- Event Name
- Event Actor
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- Event Date
- Period
- Event Place
- Event Method
- Materials / Technique
- Thing Present
- Event Related
- Event Description

ObjectWorkType: Schlosspark

Title: Schlosspark Nymphenburg

Event

event
eventType: Herstellung / Production
eventActor: displayActorInRole unknown
eventDate
displayDate: ab 1664
date
earliestDate: 1664
latestDate: 1664
eventPlace
amePlace: München - Nymphenburg
Event

- Event Identifier
- Event Type
- Role in Event
- Event Name
- Event Actor
- Culture
- Event Date
- Period
- Event Place
- Event Method
- Materials / Technique
- Thing Present
- Event Related
- Event Description

objectWorkType: Schlosspark

title: Schlosspark Nymphenburg

event
eventType

eventType

Erweiterung / Part Addition

eventActor
displayActorInRole Charles Carbonet (1701?-1715)
actorInRole actor

nameActor Carbonet, Charles
goertner Architekt

roleActor Gartenarchitekt

eventDate

earliestDate 1702
latestDate 1702

eventPlace

place

namePlace München - Nymphenburg
Event Identifier
- Event Type
- Role in Event
- Event Name
- Event Actor
- Culture
- Event Date
- Period
- Event Place
- Event Method
- Materials / Technique
- Thing Present
- Event Related
- Event Description

objectWorkType: Schlosspark

Schlosspark Nymphenburg

eventType: Umgestaltung / Modification

eventActor:
- displayActorInRole Friedrich L. von Sckell
- actor
- nameActor Sckell, Friedrich Ludwig von
- roleActor Gartenarchitekt

eventDate:
- earliestDate 1799
- latestDate 1823

eventPlace:
- place
- namePlace München - Nymphenburg
objectWorkType: Kragenflasche

event

eventType Production

culture Trichterbecherkultur

eventDate
earliestDate -4000
latestDate -2800

periodName Neolithikum

eventMaterialsTech

materialsTech

termMaterialsTech Ton
**Object Work Type:** Kragenflasche

**Event**

**Event Type:** Find

**Event Place**

- **Name Place:** HH-Ohlsdorf
- **Part Of Place:** Hamburg
<table>
<thead>
<tr>
<th>Basic Event Types include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition</td>
</tr>
<tr>
<td>Collecting</td>
</tr>
<tr>
<td>Commissioning</td>
</tr>
<tr>
<td>Conservation</td>
</tr>
<tr>
<td>Creation</td>
</tr>
<tr>
<td>Designing</td>
</tr>
<tr>
<td>Destruction</td>
</tr>
<tr>
<td>Excavation</td>
</tr>
<tr>
<td>Exhibition</td>
</tr>
<tr>
<td>Structure</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Object Classifications</strong> –</td>
</tr>
<tr>
<td>Object / Work Type <em>(mandatory)</em></td>
</tr>
<tr>
<td>Classification</td>
</tr>
<tr>
<td>- Object Identifications –</td>
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<tr>
<td>State / Edition</td>
</tr>
<tr>
<td>Object Description</td>
</tr>
</tbody>
</table>
- Extent Subject
- Subject Concept
- Subject Actor
- Subject Date
- Subject Place
- Subject Event
- Subject Object

subjectSet

  subject (type: Ikonographie)
    subjectConcept
      conceptID: 25 124 (type: local) (source: Iconclass)
      term: Dorfbewohner, Dörfler

subjectSet

  subject (type: Ikonographie)
    subjectConcept
      conceptID: 46 A 13 2 (type: local) (source: Iconclass)
      term: öffentliche Straße in einem Dorf

subjectSet

  subject (type: Ikonographie)
    subjectConcept
      conceptID: 43 B 31 (type: local) (source: Iconclass)
      term: Gasthaus, Kaffeehaus, Kneipe, etc.
Holzschnitt/Woodcut:
*Bildnis des Johann Aventinus*

creator: Hans Sebald Lautensack -> Event
depicted Person: Johann Aventius -> Subject Actor
- Extent Subject
- Subject Concept
- Subject Actor
- Subject Date
- Subject Place
- Subject Event
- Subject Object

Structure

Subject / Content

objectWorkType: Druck
subject
subjectActor
displayActor
Johannes Aventinus
actor
actorID
type URL
source GND
http://d-nb.info/gnd/11850522X
nameActor
pref preferred
Aventinus, Johannes
nameActor
pref alternate
Thurmair, Johannes
nameActor
pref alternate...
vitalDatesActor 1477-1534
Der Hamburger Brand war ein großer Stadtbrand in Hamburg, der zwischen dem 5. Mai und dem 8. Mai 1842...
- **Object Classifications** –

**Object / Work Type** *(mandatory)*

Classification

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Measurements

- **Events** –

Event Set

- **Relations** –

Subject Set

Related Works

- **Administrative Metadata** –

Rights

**Record** *(mandatory)*

Resource
Lightweight Information Describing Objects

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