An introduction

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1. Background

2. LIDO – Lightweight Information Describing Objects: Contributing Content to Cultural Heritage Repositories

3. Mapping Overview
1. Background

2. LIDO – Lightweight Information Describing Objects: Contributing Content to Cultural Heritage Repositories

3. Mapping Overview
Background

The broad view standards

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

...
Background

The broad view standards

There are many memory institutions – archives, museums, libraries, heritage protection

Each institution has its own specifics, documentation structures, vocabularies
Standards are needed for integrating and exchanging information between institutions
Introduction

The broad view standards

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!
    (though its RDF representation is becoming the reference)
“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

E55 Types

Who
E39 Actors

What
E28 Conceptual Objects
E18 Physical Thing

When
E2 Temporal Entities
E52 Time-Spans

Where
E53 Places

EVENT

participate in
affect or / refer to

referto / refine

E41 Appellations

refer to / identify

location

at

within
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
The broad view standards

- There are different layers to be considered:
  - Publication / Exchange Protocols
    *purely technical*
  - Data Structure Standards
  - Data Content Standards
  - Data Value Standards
CIDOC-CRM / ISO 21127

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

Iconclass
GND

Dublin Core elements
VRA Core Categories
AACR2/ISBD area & sub-area names + types of entry
RDA elements
EAD elements
AACR2 content rules
CCO (Cataloging Cultural Objects)
DACS (Describing Archives: A Content Standard)

LIDO
XML
MARC (MACHine Readable Cataloging)
MARCXML
MODS XML
ISBD areas and punctuation
OPAC local display settings
CSS stylesheet for XML display

https://pantherfile.uwm.edu/ml/www/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
Release during ICOM-CIDOC Conference
LIDO - Lightweight Information Describing Objects
Version 1.0

November 2010
Erin Coburn,
Richard Light, Gordon McKenna,
Regine Stein, Axel Vitzthum

LIDO v1.0 has been released at CIDOCs 2010 annual conference November 8th–10th!

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

2. LIDO – Lightweight Information Describing Objects: Contributing Content to Cultural Heritage Repositories

3. Mapping Overview
<table>
<thead>
<tr>
<th>Purpose</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collections of History / Cultural History</td>
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<td>Architecture</td>
<td>Photography Collections</td>
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</table>

...
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
References to Controlled Vocabulary

Gothic style
Gotik
Trecento

Using Webservice / REST / SRU:
http://digicult.vocnet.org/style/601.46
[or lexical value „Gotik“ in the concept scheme „Style“]

LIDO-XML

...
• Identifiers are repeatable

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

• Example:

```xml
```
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
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Structure

Object Classification

- Object Classifications –
  - Event Set
  - Relations –
    - Subject Set
    - Related Works
  - Administrative Metadata –
    - Rights
    - Record (mandatory)
    - Resource

Object / Work Type (mandatory)

Classification

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

ObjectWorkType: Aquarell


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.
Object Classification

classification: Zeichnung / Grafik

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.
Structure

Object Classification

- objectWorkType: Mineral
  - classification: Malachit
    - type: Mineral systematic classification: Azurit
      - type: Mineral systematic
Structure

Object Identification

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  Object / Work Type *(mandatory)*
  Classification
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- Events –
  Event Set
  - Relations –
  Subject Set
  Related Works
  - Administrative Metadata –
  Rights
  Record *(mandatory)*
  Resource
Object Identification

**title**
Ruine der Petri-Kirche nach Sprengung des südwestlichen Seitenschiffendes

**inscription**
type **Signatur**

**inscriptionDescription**
type: **Beschreibung**
descriptiveNoteValue: unten rechts: "C. Laeisz.", handgeschrieben
Object Identification

objectWorkType: *Gemälde*

title: „*Hohe Wogen*“

default: preferred

descriptiveNote: „Wie alle reinen Meeresbilder ...“

objectMeasurementsSet

displayObjectMeasurements: H: 67 cm, B: 87 cm

objectMeasurementsSet

measurementType: height
measurementUnit: cm
measurementValue: 67

measurementType: width
measurementUnit: cm
measurementValue: 87
Structure

Object Identification

objectWorkType: Gemälde

Designation and unambiguous identification of the institution of custody

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
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)*
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    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>
</table>
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 Herstellung / Production
eventActor
displayActorInRole unknown

eventDate
displayDate ab 1664
date
earliestDate 1664
latestDate 1664
eventPlace place
namePlace 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: Erweiterung / Part Addition

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

---

**Event**

- objectWorkType: *Schlosspark*
- title: *Schlosspark Nymphenburg*

**Event Details**

- eventType: Umgestaltung / Modification
- eventActor: Friedrich L. von Sckell
- displayActorInRole: Gartenarchitekt
- nameActor: Sckell, Friedrich Ludwig von
- roleActor: Gartenarchitekt
- eventDate: earliestDate 1799, latestDate 1823
- eventPlace: place München - Nymphenburg
ObjectWorkType: Kragenflasche

Event

eventType Production

culture Trichterbecherkultur

eventDate
-earliestDate: -4000
-latestDate: -2800

periodName Neolithikum

eventMaterialsTech
materialsTech

termMaterialsTech Ton
objectWorkType: Kragenflasche

event
eventType: Find
eventPlace

place

namePlace: HH-Ohlsdorf
partOfPlace: Hamburg
## Basic Event Types include:

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Action Type</th>
<th>Action Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition</td>
<td>Finding</td>
<td>Production</td>
</tr>
<tr>
<td>Collecting</td>
<td>Loss</td>
<td>Provenance</td>
</tr>
<tr>
<td>Commissioning</td>
<td>Marketing</td>
<td>Publication</td>
</tr>
<tr>
<td>Conservation</td>
<td>Modification</td>
<td>Restoration</td>
</tr>
<tr>
<td>Creation</td>
<td>Move</td>
<td>Transformation</td>
</tr>
<tr>
<td>Designing</td>
<td>Part addition</td>
<td>Type assignment</td>
</tr>
<tr>
<td>Destruction</td>
<td>Part removal</td>
<td>Type creation</td>
</tr>
<tr>
<td>Excavation</td>
<td>Performance</td>
<td>Use</td>
</tr>
<tr>
<td>Exhibition</td>
<td>Planning</td>
<td></td>
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- Events –
  Event Set
  - Relations –
    Subject Set
    Related Works

- Administrative Metadata –
  Rights
  Record (*mandatory*)
  Resource
Structure

Subject / Content

- Extent Subject
- Subject Concept
- Subject Actor
- Subject Date
- Subject Place
- Subject Event
- Subject Object
Holzschnitt/Woodcut:
Bildnis des Johann Aventinus

creator: Hans Sebald Lautensack -> Event

depicted Person: Johann Aventius -> Subject Actor
Structure

Subject / Content

- Extent Subject
- Subject Concept
- Subject Actor
- Subject Date
- Subject Place
- Subject Event
- Subject Object

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
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...
Structure

Administrative Metadata

- Object Classifications –
  Object / Work Type (*mandatory*)
  Classification
  - Object Identifications –
  Title / Name (*mandatory*)
  Inscriptions
  Repository / Location
  State / Edition
  Object Description
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Standards are fundamentally facilitating cooperation.
Quality matters!
Regine Stein

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