Contributing Content to Cultural Heritage Repositories
Why a standard format for contributing content?

- Increasing relevance of internet presence for museums and other collections
- Increasing necessity to integrate your data in online services: facilitate resource discovery in a cross-collection and even cross-sectoral (archives, libraries, museums) manner
- Need for a convenient instrument to provide core data on museum objects
  - from different collections / object classes
  - from different data structures
  - from different software systems
Purpose

Why

Zoological Museums

Archaeological Museums

Botanical Gardens

Computer Collections

Geological and Mineralogical Museums

Medical and Pharmaceutical Collections

Museums of Cultural History

Museums of Fire Fighting

Theatre History Collections

Art Museums
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.
LIDO is NOT

- A fully developed data exchange format.
- A format designed for proper cataloging – it is not intended to be used as a basis for a collection management system or to support loan and acquisition activities.
• 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 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
Schema Design

Groups of Information

Descriptive and administrative information groups in LIDO

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

- **Events** –
  - **Event Set**

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

- **Administrative Metadata** –
  - **Rights**
  - **Record** \((\text{mandatory})\)
  - **Resource**
## Schema Design

### Mandatory elements

- **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

- `xml:lang` 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 `xml:lang` attributes for fully multi-lingual resources

  or

- Repeat text-level elements with different `xml:lang` attributes for providing translations only for just a few elements
Full support of multilinguality - Example

```xml
<lido:lido>
  <lido:lidoRecID lido:type="local">1300_MFV 1893-237</lido:lidoRecID>
  <lido:category lido:source="CIDOC CRM v 5.0.1">E22.Man-Made_Object</lido:category>
  <lido:objectClassID>... </lido:objectClassID>

  <lido:descriptionMetadata xml:lang="de">
    <lido:eventWrap>
      <lido:event>
        <lido:eventType>
          <lido:term>Production</lido:term>
        </lido:eventType>
        ... </lido:event>
      </lido:eventWrap>

      <lido:eventMateriale>
        <lido:materialsTech>
          <lido:termMaterialsTech lido:type="Material">
            <lido:term>Ton</lido:term>
            <lido:term clay="en">clay</lido:term>
          </lido:termMaterialsTech>
        </lido:materialsTech>
      </lido:eventMateriale>
    </lido:descriptionMetadata>
  </lido:lido>
```
• Distinguish identifiers for an entity itself and a webresource about it!

• Identifiers are repeatable

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

• Example:

Schema Design

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

...
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
Structure

Object Classification

- Object Classifications –
- Events –
  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
Object Classification

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

Object Identification

- 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
Object Identification

**objectWorkType:** Mineral

**classification:** Malachit
  **type:** Mineral systematic

**classification:** Azurit
  **type:** Mineral systematic

**title:** Mineral
  **type:** object name

*mandatory*
objectWorkType: Gemälde

title: "Hohe Wogen"
pref: preferred

descriptiveNote: "Wie alle reinen Meeresbilder ..."

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

objectMeasurementsSet
unit: cm

measurementsSet
type: height
value: 67

measurementsSet
type: width
value: 87
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
    - exact Location
    - 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)*
  Classification
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  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>
</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 / Creation
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
title: Gartenarchitekt
actor
title: Carbonet, Charles
roleActor

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
Object Work Type: Kragenflasche

Event

- Event Type: Production
- Culture: Trichterbecherkultur
- Event Date:
  - Earliest Date: -4000
  - Latest Date: -2800
- Period Name: Neolithikum
- Event Materials Tech:
  - Term Materials Tech: Ton
objectWorkType: Kragenflasche

event
  eventType: Find
  eventPlace
    place
      namePlace: HH-Ohlsdorf
      partOfPlace: Hamburg
- 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
Structure
Subject / Content

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

subjectSet

subject (type: Ikonographie)

subjectConcept

conceptID: 25 1 24 (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
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
- nameActor: Aventinus, Johannes
- pref preferred
- alternate: Thurmair, Johannes
- nameActor
- pref alternate
- ... vitalDatesActor: 1477-1534
objectWorkType: **Druck**

**subject**

**subjectActor**

**displayActor** Johannes Aventinus

**actor**

**actorID**

**type** URL

**source** GND

**URL** http://d-nb.info/gnd/11850522X

**nameActor**

**pref** preferred Aventinus, Johannes

**nameActor**

**pref** alternate Thurmair, Johannes

**vitalDatesActor** 1477-1534
Allows for full content description of event photographs

objectWorkType: Photography

title Yalta summit in 1945 with Winston Churchill, Franklin Roosevelt and Joseph Stalin

eventType Activity

eventName Yalta conference

nameActor Churchill, Winston

nameActor Roosevelt, Franklin D.

nameActor Stalin, Joseph

eventDate earliestDate 1945

latestDate 1945

eventPlace namePlace Yalta
Structure

Administrative Metadata

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

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

- Administrative Metadata –
  Rights
  Record \textit{(mandatory)}
  Resource
Lightweight Information Describing Objects

www.lido-schema.org