LOUD: Linked Open Usable Data & linked.art

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Why digital metadata?

Who are our users?
What do they want?

Adolf von Menzel (German, 1815 - 1905)
Figure Studies, 1872, Carpenter's pencil
The J. Paul Getty Museum, Los Angeles
Three user types:

• Cataloguers describing collections
• Researchers using digital methods
• Developers enabling access
— Catalogers interpret and structure the real world.
— Researchers ask novel questions using the dataset.
— Developers consume data and enable users.

These use cases are in conflict.
How do we provide semantic data to lazy developers?

Gerrit Dou (Dutch, 1613 - 1675)
Astronomer by Candlelight, late 1650s, Oil on panel
The J. Paul Getty Museum, Los Angeles
The CIDOC-CRM is write-only.
You need to try to use the data.

— Consistent modeling patterns are needed
— Semantic correctness is **not** sufficient
— Structure is as important as semantics
Lessons Learned

— Our tasks are Search, Browse, & Display
— There is no primary entity
— Reconciliation is essential
Linked.art is a RDF profile of the CIDOC-CRM that uses JSON-LD and the Getty Vocabularies to describe object-based cultural heritage in an event-based framework for consumption by software applications.

It uses a subset of classes from the CIDOC-CRM along with other commonly-used RDF ontologies to provide interoperable patterns and models that can be interpreted either as JSON or as RDF.
LOUD: Linked Open Usable Data

Semanatically modeled cultural heritage data for web developers.

Joseph Wilton (English, 1722 - 1803)
Bust of Pseudo-Seneca (after the antique)
1755 - 1765, Marble
The J. Paul Getty Museum, Los Angeles
Balancing complexity and usability
RDF Graphs as JSON-LD documents.

Complexity is hidden, not eliminated.
Four Patterns
Class Specificity and Classifications

Diagram:
- "Irides" with properties:
  - rdf:type
  - classified_as
- "Man-Made Object"
  - crm:E22
- "Painting"
  - aat:300033618
Strings, Things, and Linguistic Objects

```
<table>
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<th>Centimeters</th>
<th>Dimension</th>
<th>Linguistic Object</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
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<td>value</td>
<td>&quot;74.3 x 94.3 cm&quot;</td>
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<tr>
<td>aat:300055647</td>
<td></td>
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<td></td>
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</tbody>
</table>
```
Partitioning and Membership
Conceptual Groupings
Three Problems
The Problem of Complexity

Making complex models simple.

Friedrich Winter (Polish (Silesian))
Covered Goblet, about 1691 - 1694
Colorless glass with wheel-engraved decoration
The J. Paul Getty Museum, Los Angeles
The Problem of Context

Querying data with a point of view.

Albrecht Dürer (German, 1471 - 1528)
Stag Beetle, 1505, Watercolor and gouache; upper left corner of paper added, with tip of left antenna painted in by a later hand
The J. Paul Getty Museum, Los Angeles
The Problem of Change

changing records about changing things.

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Claude Monet (French, 1840 - 1926)
The Portal of Rouen Cathedral in Morning Light, 1894
Oil on canvas
The J. Paul Getty Museum, Los Angeles
Next steps
LINKED ART COLLABORATION

Getty
Rijksmuseum
Louvre
Metropolitan Museum of Art
Smithsonian
MoMA
National Gallery of Art
Philadelphia Art Museum
Indianapolis Art Museum
Harvard University
Princeton University
Yale Centre for British Art
Oxford University
Academica Sinica
ETH Zurich
FORTH
Zeri Foundation (U. Bologna)
Canadian Heritage Info. Network
American Numismatics Society
http://linked.art

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