The benefits of the Europeana Data Model for Cultural Heritage

Valentine Charles

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Moving from ESE to EDM

→ Starting point the Europeana Semantic Elements (V3.4)
  • A Dublin core-based application profile + Europeana coined elements
  • Cross-domain schema for heterogeneous data

→ Goal to move to a model that allows more sophisticated representation of data

→ preserve original data while still allowing for interoperability
  • Semantic Web representation
  • Semantic linking between objects
Issues with ESE: Flatness of the model

ESE is a flat model, which is using mostly simple text strings
Issues with ESE: Lack of relationships

Prevent the representation of explicit links between Europeana objects
Issues with ESE: Mixing of information

Les frontières de France et d'Espagne tant deça que de la les monts Pirenées ... / dressés et dediées a monseigneur le Dauphin par... de Fer; H. van Loon sculps.. A Paris chez G. Danet gendre de l'auteur...

Creator: Fer, Nicolas de; Loon, Herman van; Danet, Guillaume
Contributor: chez G. Danet gendre de l'auteur...
Coverage: Catalunya; Pirineus (serra) | 1709
Date: [2010]
Type: Image
Subject: Maps
Relation: Maps de Catalunya (es_WII); http://data.diputacion.cat
Description: Les frontières de France et d'Espagne tant deça que de la les monts Pirenées ... / dressés et dediées a monseigneur le Dauphin par... de Fer; H. van Loon sculps.. A Paris chez G. Danet gendre de l'auteur...

Violation of the one to one principle
→ Cause issues for exploiting and redistributing the data
EDM requirements

1. Distinguish between the real world object (painting, book, program) and its digital representation

2. And the object and the metadata record describing the object.

3. Allow multiple records for the same object,
   - containing potentially contradictory statements about an object

4. Support for objects that are composed of other objects

5. Standard metadata format that can be specialized

6. Standard vocabulary format that can be specialized

7. EDM should be based on existing standards
EDM is allowing a better description of resources

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4. Support for objects that are composed of other objects

   OAI ORE for organization of metadata about an object

   → Requirements 1 to 4 - distinguishing between objects
EDM is allowing a better description of resources

An aggregation is a logical “bundle” of an object plus its digital representation(s)

- **ore:Aggregation** (Identifier of aggregation)
  - edm:aggregatedCHO + identifier of the aggregated CHO
  - edm:hasView + identifier of the WebResource defined

- **edm:ProvidedCHO** (Identifier of real object)

- **edm:WebResource** (Identifier of web resource)
EDM helps enriching data

- EDM is defining the following contextual entities:
  - Agent
  - Time
  - Concept
  - Place
  - Event
EDM helps enriching data

A ProvidedCHO with two contextual resources

edm:ProvidedCHO
[identifier for "real" object]

edm:Agent
[identifier for agent resource]

12-02-1809

12-04-1882

skos:Concept
[identifier for the concept resource]

Evolution

L'évolution

Entwicklung

Darwin, Charles
EDM contributes to the Web of Data or Semantic Web

5. Standard metadata format that can be specialized
6. Standard vocabulary format that can be specialized
7. EDM should be based on existing standards

Dublin Core for descriptive metadata representation
⇒ Requirement 5

SKOS for conceptual vocabulary representation
⇒ Requirement 6

OAI ORE, Dublin Core and SKOS together fulfil
⇒ Requirement 7
EDM contributes to the Web of Data or Semantic Web

→ Offer the possibility of redistributing the data as linked open data
  - “Open”: metadata freely available for anyone to re-use under Creative Commons Zero (CC0) -public domain dedication
  - Linked Data: http://data.europeana.eu/

→ Offer the possibility of creating semantic networks using the resources available in the “Linked Open DataCloud” (LOD Cloud)
  - Examples of such data sources in the LOD cloud are vocabularies about persons like VIAF#, about places like Geonames# or about any kind of knowledge like DBpedia# which is the RDF representation of Wikipedia.
EDM changes resources discovery in Europeana

EDM allows the visualisation of complex relations between objects

- Objects with multiple views
- Hierarchical objects
EDM changes resources discovery in Europeana

→ EDM provides access to contextual information about an objects: who, what, when, where questions
→ EDM allows new browsing experiences
  • Search by places, agents, date.
Moving to implementation

→ Implementation will be an incremental process
  • Experiment with what is doable
  • Take partners with us
→ Start with a subset of the classes and properties in the model
→ Allocation of all existing properties to the classes
  • ESE elements and new EDM elements
→ Creation of default mapping from existing ESE to EDM
→ Working templates created listing these
  • Giving characteristics of each property
    • Obligation and type of value
→ Identification of properties from other namespaces for the contextual entities
  • Mostly these did not already exist in ESE, some had been created in EDM
Documentation

http://pro.europeana.eu/edm-documentation

➤ Europeana Data Model Mapping Guidelines
  • About the first implementation
  • With example data mapping

➤ Europeana Data Model Definition
  • Full specification

➤ Europeana Data Model Primer
  • The story of EDM

➤ Other documents relating to EDM
  • Case studies showing edm data from different providers
Thank you

Valentine Charles
valentine.charles@kb.nl