MODELLING AND EXCHANGING ANNOTATIONS FOR EUROPEANA PROJECTS

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SWIB15: Semantic Web in Libraries
Why are annotations useful?

• For users, a means to...
  • Contribute with their knowledge
  • Discuss and share their knowledge with others

• For Cultural Institutions, a new way and opportunity to...
  • Improve the overall quality of their data
  • Contribute to a better semantic description
  • Link to the web of data
Annotations Landscape within Europeana Network

- **PATHS project**
  - Automatic semantic enrichments

- **DM2E**
  - Scholarly annotations
  - Using the Pundit toolset ([http://thepund.it/](http://thepund.it/))

- **SEALINCmedia**
  - Expert annotation "nichesourcing"
  - Developed the Accurator tool ([http://rma-accurator.appspot.com/](http://rma-accurator.appspot.com/))

- **Europeana Creative**
  - Pre-alpha version of the AnnotationsAPI

- **Europeana 1989**
  - Annotations in HistoryPin.org

- **Europeana V3**
  - Roundtripping of annotations with HistoryPin.org

- **Europeana Food&Drink**
  - Annotations in HistoryPin.org
  - Ongoing...

- **Europeana Sounds**
  - Wider range of user scenarios for annotations
  - Ongoing...
Annotation Scenarios in eSounds

• A user annotates a Cultural Heritage Object, in particular...
  • Information describing the object
  • Contextual information
  • Media resources representing the object

• In order to...
  • Comment and discuss with other users
  • Tag with terms from controlled vocabularies
  • Relate them together
  • Complete or correct information
  • Favour or moderate annotations made by other users
Overview of the Architecture
eSounds
Modelling and Exchanging Annotations for Europeana Projects

Modelling Annotations
interoperability across platforms

- We adopted the W3C Web Annotation Data Model (http://www.w3.org/TR/annotation-model/)
  - presented also at SWIB last year!
- Based on RDF and defines JSON-LD as default serialization format
- Offers a simple model for exchanging annotations across platforms
  ... but flexible enough to support complex scenarios
- Still in its early stages of design and adoption

![Diagram of Annotation Model]

Related to
Commenting and Tagging

HistoryPin.org

edm:ProvidedCHO
http://data.europeana.eu/item/...

oa:Annotation
http://data.europeana.eu/annotation/historypin/1

oa:Annotation
http://data.europeana.eu/annotation/historypin/2

oa:hasTarget

oa:hasBody

oa:commenting

oa:motivatedBy

oa:tagging

oa:motivatedBy
Annotations API

- Adopts the W3C Web Annotation Protocol (http://www.w3.org/TR/annotation-protocol/)
- Backend developed using MongoDB and Solr
- Alpha version at: http://test-annotations.europeana.eu/

CRUD methods structured per Annotation Provider (e.g. HistoryPin.org)

Auxiliary methods for developers to quickly create annotations using only parameters

Additional methods for Search
Exchanging Annotations with HistoryPin.org

Webpage depicting the annotation

prov:wasDerivedFrom

An URI is generated reusing the local id from HistoryPin.org

http://www.historypin.org/map/#!/dialog:177232/

HistoryPin API
JSON

Europeana Roundtripping PoC

HistoryPin API
Annotation Server

Prov: wasDerivedFrom

An URI is generated reusing the local id from HistoryPin.org

http://www.historypin.org/map/#!/dialog:177232/

Performs checks, normalization if needed, detects updates

Annotations API
Web Annotation Protocol

oa:Annotation
http://data.europeana.eu/annotation/historypin/1234
Capturing Provenance for HistoryPin.org

oa:Annotation
http://data.europeana.eu/annotation/historypin/1

- oa:annotatedBy
  - foaf:Person
    https://www.historypin.org/en/person/55376/

- oa:annotatedAt
  - When was created in HistoryPin.org

- oa:generatedBy
  - prov:SoftwareAgent
    http://www.historypin.org

- oa:generatedAt
  - When was sent to Europeana
A concrete annotation from HistoryPin.org

```json
{
    "@context": "http://www.w3.org/ns/oa-context-20130208.json",
    "@id": "http://test-annotations.europeana.eu/annotation/historypin/136290",
    "@type": "oa:Annotation",
    "annotatedAt": "2015-02-27T12:00:43",
    "annotatedBy": {
        "@id": "https://www.historypin.org/en/person/55201/",
        "@type": "foaf:Person",
        "name": "Lise Schauer"
    },
    "body": "bus",
    "motivation": "oa:tagging",
    "serializedAt": "2015-02-28T13:00:34",
    "serializedBy": {
        "@id": "https://www.historypin.org/en/person/55201/",
        "@type": "foaf:Person",
        "name": "Lise Schauer"
    },
    "target": "http://data.europeana.eu/item/9200257/BibliographicResource_3000055619928"
}
```
Tagging with Controlled Vocabularies with Pund.it

Available Vocabularies / Datasets

edm:ProvidedCHO
http://data.europeana.eu/Item/...

oa:SemanticTag
#tag1

oa:hasBody

oa:hasTarget

oa:tagging

oa:motivatedBy

edm:ProvidedCHO
http://data.europeana.eu/item/...

skos:Concept
http://dbpedia.org/resource/Brass_instrument

skos:related

DBpedia API
http://data.europeana.eu/annotation/...

Modelling and Exchanging Annotations for Europeana Projects
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Exchanging Annotations with Pund.it

1. Synchronous

Europeana Portal or Data Partner’s Website

Pundit

Pundit API

2. Asynchronous

Roundtrip Daemon

Annotations API
Web Annotation Protocol

Annotation Server
Modelling Metadata Annotations
A proposal

• We consider metadata annotations as...
  • any annotation that refers to or asserts a statement to the
    information describing an object in order to complete or correct it

• Ideally, and like other annotations, they should be
  • agnostic to the way they are presented to the user in the interface
  • machine readable

• So that metadata annotations can
  • survive changes to the interface design;
  • allow them to be easily shared outside the interface they were
    originally created;
  • allow for other software applications to take further advantage of it
Modelling Metadata Annotations
Proposal for a correction

A specific motivation may be needed

Similar to a rdf:Statement but following WA guidelines
wrapping up...

• Representing and exchanging annotations is relevant for many applications in the Europeana Network
  … it is still work in progress

• On modelling...
  • W3C Web Annotation Data Model gives a good interoperable base
  • Need for best practices for specific applications / domains to ensure consistency across platforms
    • i.e. for metadata annotations

• On exchange...
  • Web Annotation Protocol has just been release
  • Support for more methods is essential (i.e. search)
  • Still needs to mature and achieve wider adoption
Thank you!