MuseoSuomi
Suomen museot semanttisessä webissä
http://www.museosuomi.fi

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Original Research
Consortium

National Board of Antiquities
Espoo City Museum
Lahti City Museum
Helsinki University Museum

ANTIKVARIA GROUP

Co-operation with:
Finnish National Gallery

UNIVERSITY OF HELSINKI

NOKIA
Connecting People

TietoEnator
Building the Information Society

TEKES
The Vision of MuseumFinland

1. Global View to Distributed Collections
   • One seamless national collection (virtually)
   • “Museums in Finland” -> “Museum of Finland”

2. Intelligent Services to End-Users
   • Search: Concept-Based Information Retrieval
   • Browsing: Semantically Linked Contents

3. Easy Content Publication for Museums

Creating a national platform and a process for the museums to publish their content together on the Semantic Web
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A Paradigmatic Example: Australian Museums Online
Search Result
Problems

- How to find the right keywords?
- Likely results: no-hits or 1000 hits
- Too many irrelevant hits (low precision)
- Too few relevant hits (low recall)
- How to get overviews of the contents?
- How to find related objects?
- Is this entertaining?
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MuseumFinland Approach

Semantically linked WWW space of the database contents

Database 1

Database 2

Database 3

Heterogeneous Distributed Databases
Live Demonstration

http://www.museosuomi.fi

1. Multi-facet search
   - Based on ontologies

2. Keyword search
   - Based on concepts

3. Semantic browsing
   - Based on logic
MuseumFinland
Mobile Version

- WAP 2.0 compatible phones
- Nokia Series 60 browser
- Combining coordinates and location ontology
- Getting more info by email
- Same URL: http://museosuomi.cs.helsinki.fi
## Ontologies: The Basis of MuseumFinland

7 ontologies, 10,000 interlinked concepts, 4500 collection artifacts & archelogical sites

<table>
<thead>
<tr>
<th>VIEW TYPE</th>
<th>VIEW NAME</th>
<th>ONTOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object Views</td>
<td>Artifact</td>
<td>Artifacts</td>
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<td>Events</td>
</tr>
<tr>
<td>Collection View</td>
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</tbody>
</table>
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3. **Easy Content Publication for Museums**

Creating a national platform and a process for the museums to publish their content together on the Semantic Web
3. Easy Local Content Publication

- The simple publishing idea of the WWW
- The museum creates RDF and publishes it in a public directory or on CD
Example: XML2RDF

**XML - format**

```xml
<artifact>
  <id>NBA:H26069:467</id>
  <target>cup and plate</target>
  <material>porcelain</material>
  <creationLocation>Germany</creationLocation>
  <creator>Meissen</creator>
</artifact>
```

**RDF - format**

```xml
<artifact:artifact
  rdf:about="&artifact,NBA_H26069_467"
  artifact:target_literal="cup and plate"
  artifact:material_literal="porcelain"
  artifact:creator_literal="Meissen"
  artifact:creationLocation_literal="Germany">
  <artifact:target rdf:resource="&artifacts;cups"/>
  <artifact:target rdf:resource="&artifacts;plates"/>
  <artifact:material
    rdf:resource="&materials;porcelain"/>
  <artifact:creationLocation
    rdf:resource="&locations;Germany"/>
  <artifact:creator rdf:resource="&actors;Meissen"/>
</artifact:artifact>
```
Summary:
Why MuseumFinland?

- **Museum Visitor’s viewpoint**
  - Seamless view to heterogeneous collections
  - **Intelligent Services**
    - **Search** based on views and ontologies
    - **Browsing** based on semantic recommendations

- **Museum’s viewpoint**
  - Publication channel for the Semantic Web
  - Only content needs to be created
  - Will be enhanced with new ontologies and materials

*MuseumFinland = Demonstration on how to create a national culture content publication channel for the Semantic Web*