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

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Original Research Consortium

TEKES

National Board of Antiquities
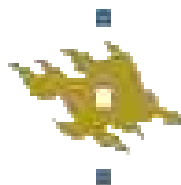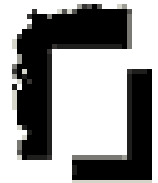
Espoo City Museum

Lahti City Museum

Helsinki University Museum

ANTIKVARIA GROUP

NOKIA CONNECTING PEOPLE

TietoEnator TE Building the Information Society

Co-operation with: Finnish National Gallery

HELSINKI INSTITUTE FOR INFORMATION TECHNOLOGY

UNIVERSITY OF HELSINKI

TEKNILLINEN KORKEAKOULU TEKNISKA HÖGSKOLAN HELSINKI UNIVERSITY OF TECHNOLOGY

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

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

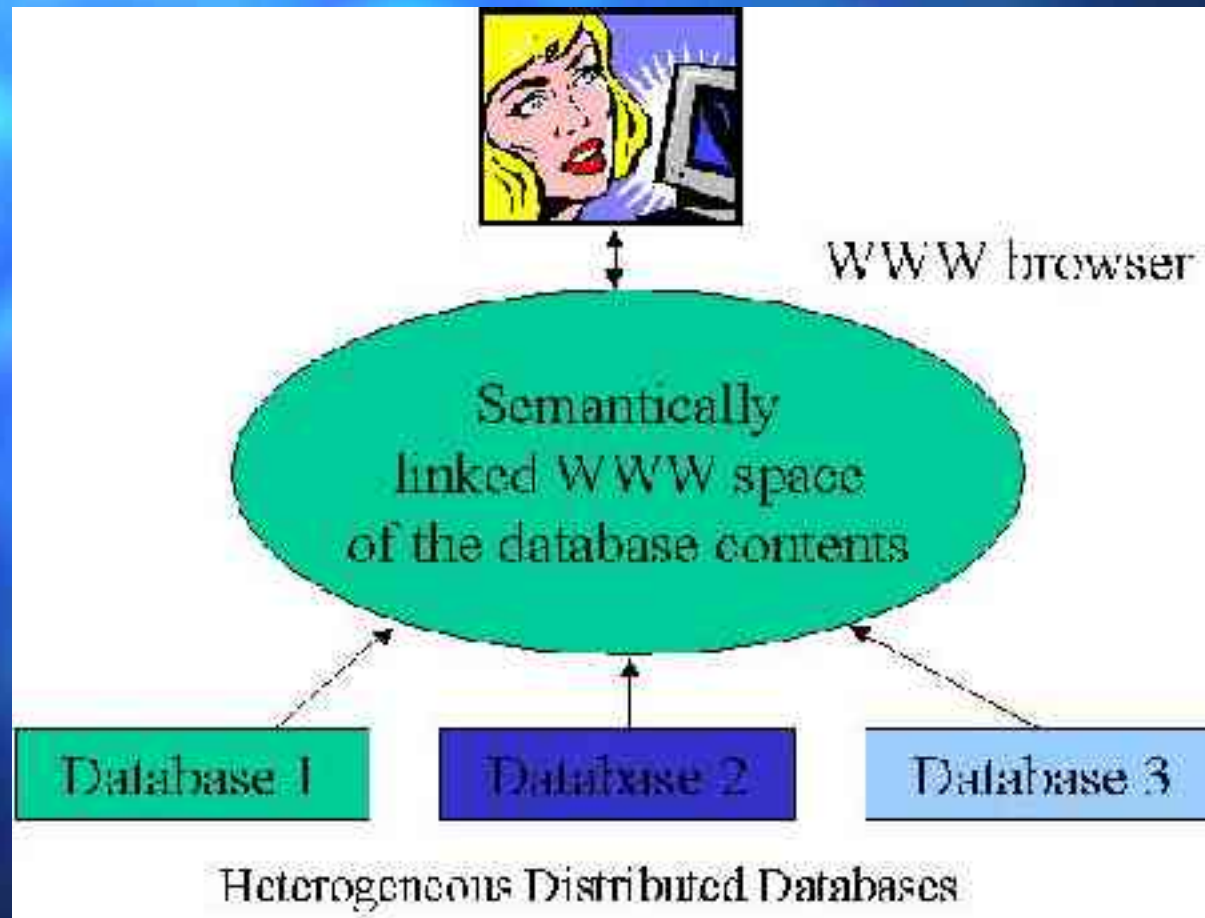| VIEW TYPE	VIEW NAME	ONTOLOGY
Object Views	Artifact	Artifacts
	Material	Materials
Creation Views	Creator	Actors
	Place of creation	Locations
	Time of creation	Times
Usage Views	User	Actors
	Place of usage	Locations
	Situation	Events
Collection View	Collection	Collections

The Vision of MuseumFinland

1. Global View to Distributed Collections
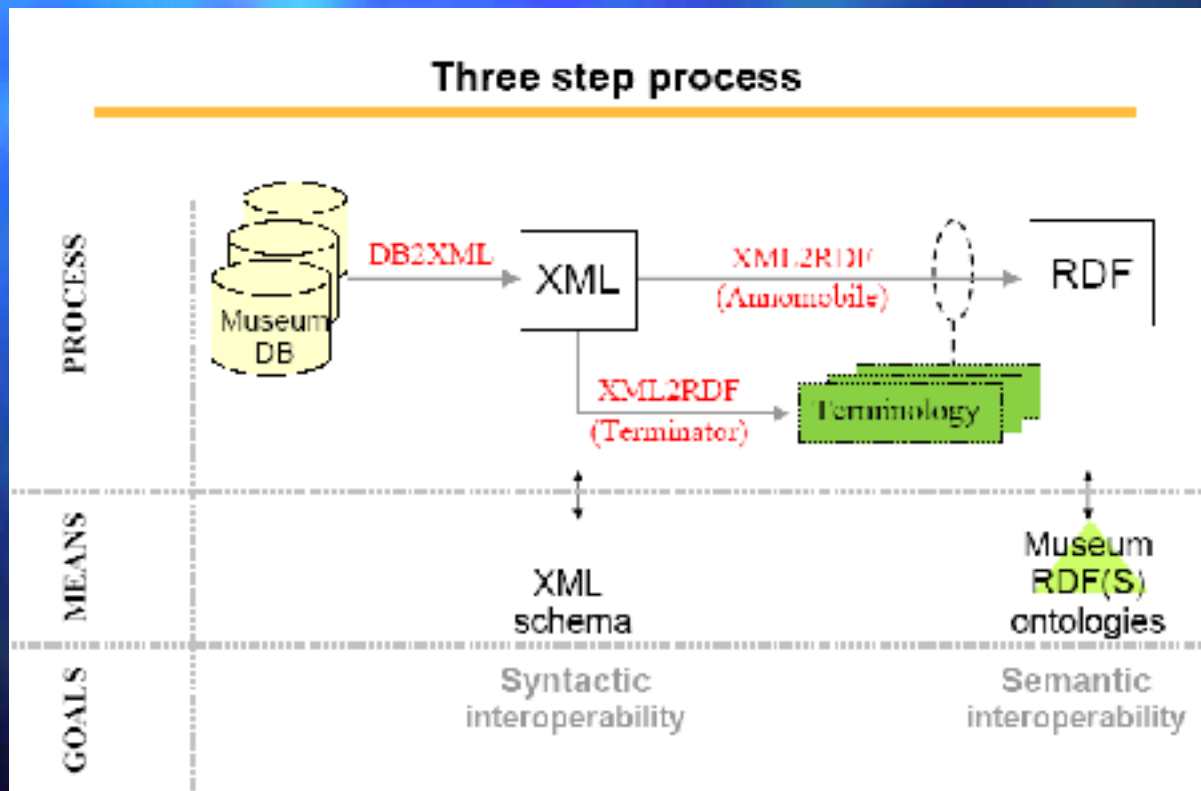   - One seamless national collection (virtually)
   - "Museums in Finland" -> "Museum of Finland"
2. Intelligent Services to End-Users
   - Search: Concept-Based Information Retrieval
   - Browsing: Semantically Linked Contents
3. **Easy Content Publication for Museums**

Creating a national platform and a process for the museums to publish their content together on the Semantic Web

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

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

RDF - format

```
<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