

# MuseoSuomi

## Suomen museot semanttisessa webissä

<http://www.museosuomi.fi>

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# Joint Work with:

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# Original Research Consortium



National Board  
of Antiquities



Espoo City  
Museum



Lahti City  
Museum

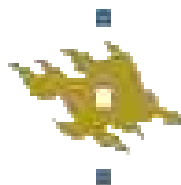
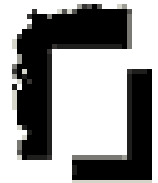


Helsinki  
University  
Museum

ANTIKVARIA GROUP



Co-operation with:  
Finnish National Gallery



UNIVERSITY  
OF HELSINKI



TEKNISTEN KOKKIKOULU  
TEKNISKA HÖGSKOLEN  
HELSINKI UNIVERSITY OF TECHNOLOGY

# The Vision of MuseumFinland

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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

The screenshot displays the Australian Museums Online (AMOL) website interface. At the top, the browser's address bar shows the URL `http://www.amol.org.au/ol/index.jsp`. The AMOL logo is visible in the top left corner, with the text "Australian Museums Online" below it. The main heading is "Open Collections".

The search interface is divided into three main sections:

- 1. Enter a keyword:** A text input field is present, followed by a "Search" button and a "Search help" link. Below the input field, a note states: "(Separate multiple keywords with a comma)".
- 2. Refine your search (optional):** This section includes a dropdown menu for "Limit the search to collection" (currently set to "All Collections (default)"), and four search criteria fields:
  - Search in: Object Type (value: chair)
  - Search in: Subject Field (value: )
  - Search in: Text Field (value: )
  - Search in: Object Field (value: )A "Find words with" dropdown menu is also visible, with a list of options: Object type, Object name, Object Creator, Object Description, and Object Code.
- 3. Format result display:** A label "Results displayed per page:" is present, but no specific value is shown.

At the bottom of the search area, there is a "Start your search" button.

# Search Result

**AMOL** Australian Museum Online  
Battersea Drive

## Open Collections

Search Results

Number of Records Searched: 50194  
Records found matching your search: 294  
Records displayed on this page: 1 to 10

Page: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 [all]

1. Title: Hibel Social Roll back chair  
RELEVANCE: 30%  
Collection: National Trust of Australia (TAS) - Tasmania  
Creator: Unknown
2. Title: Chair, Chair  
RELEVANCE: 29%  
Collection: AMOL Object Database - Creator: Inverloch and Park Museums (TAS)  
Creator: J. Knorr
3. Title: Chair, Dale Dixie Chair  
RELEVANCE: 29%  
Collection: AMOL Object Database - White House (TAS)  
Creator: J. Knorr
4. Title: Hibel Rocking Chair, Sulky Wheel Rocking Chair  
RELEVANCE: 27%  
Collection: AMOL Object Database - Griffith Pioneer Park Museum (TAS)  
Creator: Wilton, James Hill
5. Title: Hibel Chairs, Regency Chairs  
RELEVANCE: 27%  
Collection: AMOL Object Database - Collected: Historic Furnishings (TAS)  
Creator: Wilton, Susan Margaret Hill
6. Title: Chair, Whaleskin Chair  
RELEVANCE: 27%  
Collection: AMOL Object Database - Recaptured: Old Gove, Yarraman (TAS)  
Creator: John W. Hibel

# Problems

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- 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?**



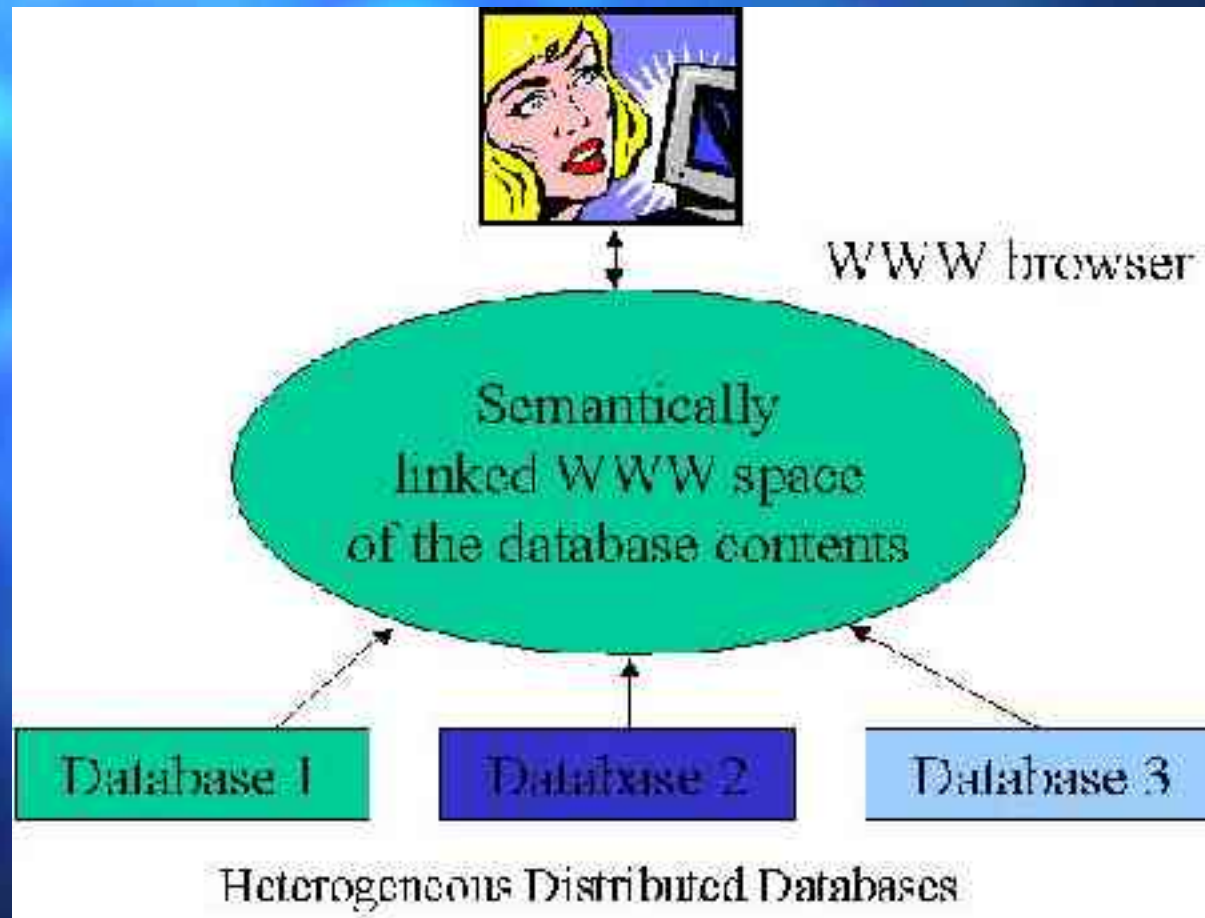
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# MuseumFinland Approach



# 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 & archeological sites

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

# The Vision of MuseumFinland

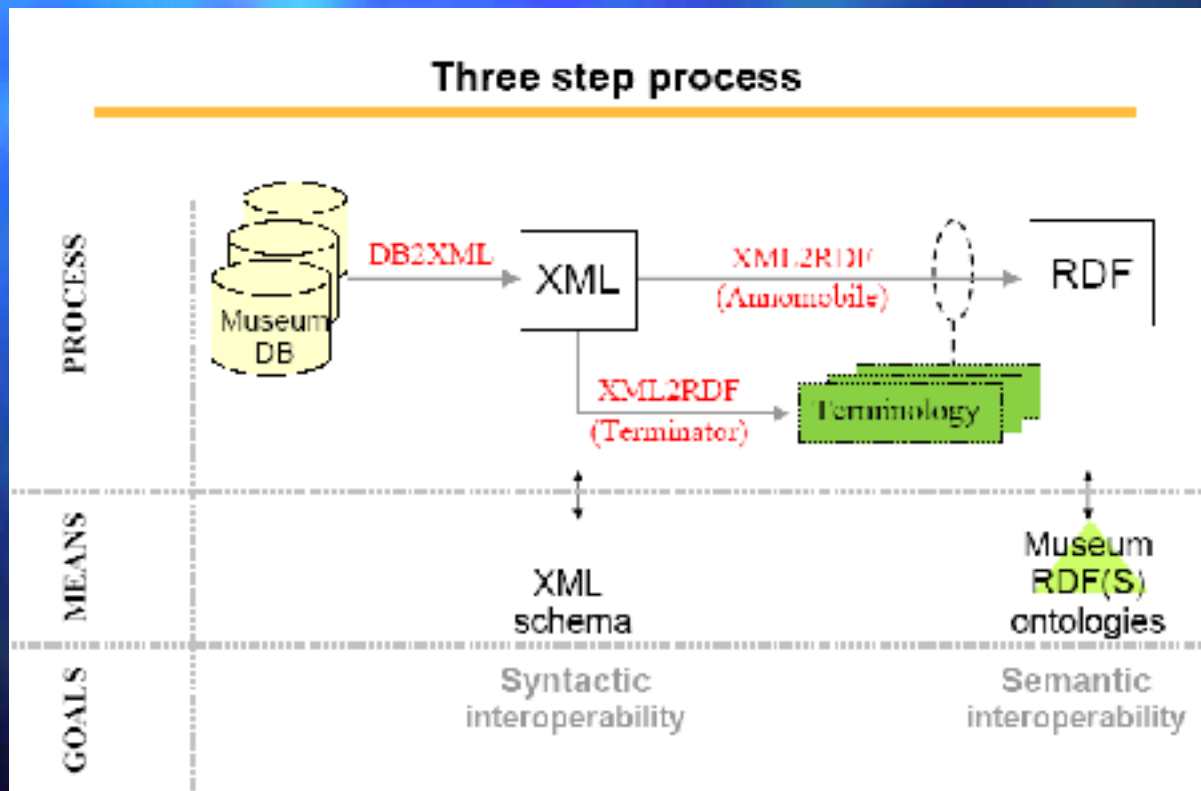
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# 3. Easy Local Content Publication

- 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?

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- 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**