MuseumFinland

- Finnish Museums on the Semantic Web

http://museosuomi.cs.helsinki.

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Research Consortium

TEKES

National Board of Antiquities

ESPOO ESBO
Espoo City Museum

Lahti City Museum

Helsinki University Museum

ANTIKVARIA GROUP

NOKIA
CONNECTING PEOPLE

TietoEnator
Building the Information Society

Co-operation with:
Finnish National Gallery

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What is MuseumFinland?

– The vision: Museums on the Semantic Web
  – Visitor's perspective
  – Museum's perspective
– The system: Demonstration

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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

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Search Result

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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?
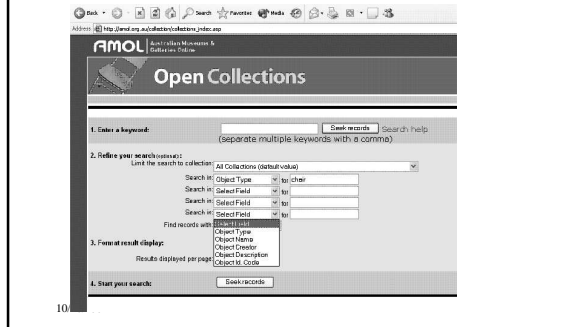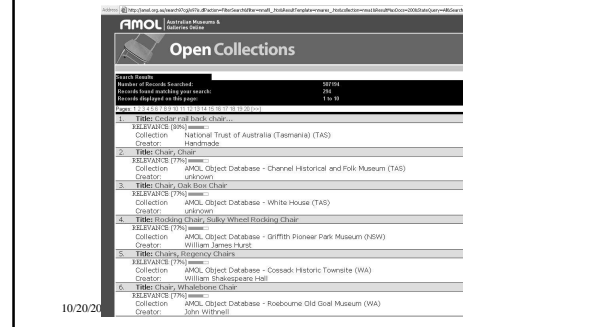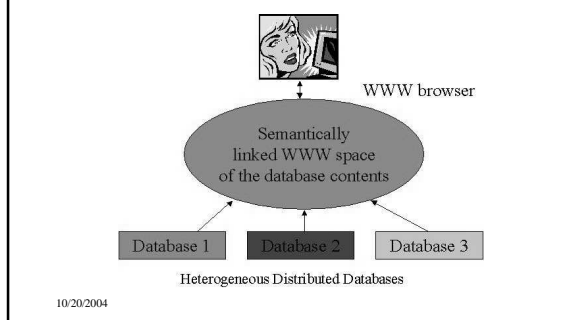- Is this entertaining?

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MuseumFinland Approach

WWW browser

Semantically linked WWW space of the database contents

Database 1   Database 2   Database 3

Heterogeneous Distributed Databases

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Live Demonstration

http://museosuomi.cs.helsinki.fi

1. Multi-facet search
   - Based on ontologies
2. Keyword search
   - Based on concepts
3. Semantic browsing
   - Based on logic

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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**

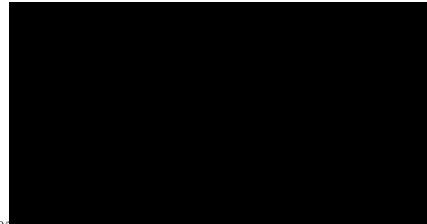
Ontologies:
The Basis of MuseumFinland

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

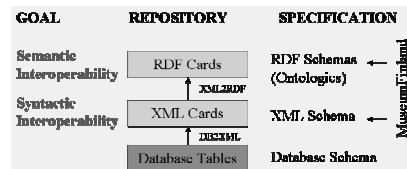## The Vision of MuseumFinland

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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)

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

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Papers on MuseumFinland (2004)

- E. Hyvönen, M. Junnila, S. Kettula, E. Mäkelä, S. Saarela, M. Salminen, A. Syreeni, A. Valo, K. Viljanen: Finnish Museums on the Semantic Web. User's Perspective on MuseumFinland. Proceedings of Museums and the Web 2004 (MW2004), Arlington, Virginia, USA, March 31 - April 3, 2004. Selected Papers.
- E. Hyvönen, M. Junnila, S. Kettula, E. Mäkelä, S. Saarela, M. Salminen, A. Syreeni, A. Valo, K. Viljanen: Publishing Museum Collections on the Semantic Web - the MuseumFinland Portal. Proceedings of WWW2004, New York, poster papers, USA, 2004 (forthcoming).
- E. Hyvönen, M. Salminen, S. Kettula, M. Junnila: A Content Creation Process for the Semantic Web. Proceedings of OntoLex 2004, Lisbon, Portugal, 2004 (forthcoming).
- E. Hyvönen, S. Saarela, K. Viljanen, E. Mäkelä, A. Valo, M. Salminen, S. Kettula, M. Junnila: A Semantic Portal for Publishing Museum Collections on the Web. Proceedings of ECAI 2004, Valencia, Spain, 2004 (forthcoming).
- E. Hyvönen, S. Saarela, K. Viljanen: Application of Ontology Techniques to View-Based Semantic Search and Browsing. Proceedings of the First European Semantic Web Symposium (ESWS 2004), Springer-Verlag, 2004 (forthcoming).
- E. Makelä, Hyvönen, S. Saarela, K. Viljanen: OntoView -- A Tool for Creating Semantic Web Portals. Paper, submitted, 2004.