A quick survey of search interfaces for web based image and learning object collections

SIM ILE Project
Mark H. Butler
mark-h.butler@hp.com
Semantic Merge Demonstration

This application demonstrates the cross-disciplinary semantic interoperability that can be achieved thru the use of Dublin Core as a base metadata element set, and RDF/RDFS as an encoding format. This interoperability is accomplished by linking XML, RSS and RDF metadata together at the schema level in a way that retains the individual "branding" of an organizations namespace.

Participants include Amico, AGLS, GEM, W3C and the Electronic Thesis and Dissertations OAI-PMH repository.
Typical outputs of semantic merge demo (agriculture query)

Input is provided via CAGRIS (XG) Library Services Unit, Research Division, Central Experiment Station, Ministry of Agriculture, Land and Marine Resources, Via Arima P.O., Centeno

Agriculture - General aspects

Ministry of Agriculture, Land and Marine Resources, Port of Spain (Trinidad and Tobago). Agricultural Planning Division.

Input is provided via CAGRIS (XG) Library Services Unit, Research Division, Central Experiment Station, Ministry of Agriculture, Land and Marine Resources, Via Arima P.O., Centeno

AGRICULTURE
Typical outputs of the semantic merge demo (2000 query)

file:///home/wagnerh/work/java/interop/.data/amico/AIC_1942.51.rdf#2002-09-03-0 [view]
catalogedDate 20000601 [view]

http://purl.org/dc/terms/TemporalScheme [view]
issued 2000-07-11 [view]

http://purl.org/dc/dcmitype/Image [view]
issued 2000-07-11 [view]

http://purl.org/dc/terms/isVersionOf [view]
issued 2000-07-11 [view]
Some observations about OCLC demo

• It is difficult for the naive user to determine the scope of the collection, and hence create useful queries - try it yourself!
• It is difficult to generate results set that use more than one vocabulary
• The results sets include schemas as well as instance data - is this the behavior the user expects?
• Can we adapt the interface so it is more likely to produce meaningful results e.g. exclude searches that mix classes and properties from different vocabularies?
• Using URIs is confusing, should use labels
• Hierarchical browsers better than list boxes as can structure elements
An overview of the different UIs available for web based image and LOM collections

<table>
<thead>
<tr>
<th>Site</th>
<th>Free text search</th>
<th>Classification browser</th>
<th>Field specific query</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPIRO</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Sample searches</td>
</tr>
<tr>
<td>IPL</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Memory</td>
<td>Yes</td>
<td>Multiple</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>National library of medicine</td>
<td>Boolean</td>
<td>Boolean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perseus</td>
<td>Yes</td>
<td>Multiple</td>
<td></td>
<td>Sample searches</td>
</tr>
<tr>
<td>Smithsonian</td>
<td></td>
<td>Multiple</td>
<td></td>
<td>Unclassified browser</td>
</tr>
<tr>
<td>UNM</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Berger Foundation</td>
<td>Yes</td>
<td>Multiple</td>
<td></td>
<td>Tours, multi-image view, some hierarchical browsing, quick survey of collection</td>
</tr>
<tr>
<td>AMICO</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Web Gallery of Art</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td>Tours, multi-image view, search bar</td>
</tr>
<tr>
<td>ADAM</td>
<td>Yes</td>
<td>Multiple</td>
<td>Yes</td>
<td>Proximity search, what’s new search, multi-option browser, place name browser, option search</td>
</tr>
<tr>
<td>Google</td>
<td></td>
<td>Boolean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flamenco</td>
<td></td>
<td></td>
<td></td>
<td>Faceted search interface</td>
</tr>
<tr>
<td>OpenCourseWare</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Learning Commons</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
Free text search (ADAM)

A simple search interface to the ADAM database

Search full text of resources

Standard results display  Concise results display
Classification browser (Internet Public Library)

The Internet Public Library

Home > Subject Collections > Arts & Humanities > Fine Arts

The nonutilitarian arts, arts concerned primarily with the creation of beauty.

Sub-headings:

Architecture
Graphic Arts
Graphic Design and related arts.
Dance
Design
Drama & Performance (Theater & Stagecraft)
Folk Art
Music
Visual Arts
### Field specific query (UNM)

<table>
<thead>
<tr>
<th>Artist:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: John Fullwood]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nationality:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: Japanese]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: Palazzo Vecchio]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Object Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: collage]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: chalk]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: mountains]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[For example: 201 B.C. to 800 A.D.]</td>
</tr>
</tbody>
</table>
Overview of Italian Painters
from 1200 to 1750

This tour provides you an overview of Italian painters active in the period 1200-1750. By selecting a local school from the list at left (or from the map, or the zoomed map), a list of artists grouped into time-frames of 50 years will appear. Short history and characterization of all local schools are also given.

Please send your comments, sign our guestbook and send a postcard.
© Web Gallery of Art, created by Emil Kren and Daniel Marx.
Multi-Image view (Berger Foundation)
Hierarchical Browsing (Berger Foundation)

Johannes Vermeer

Parcours de l'oeuvre de Vermeer
- Appendix
  - Christ in the house of Martha and Mary: 1655
  - Diana and her companions: 1655
  - Saint Praxedis: 1655-56
  - The little street: 1657-58
  - Woman with a pearl necklace: 1664
  - A woman writing: 1665
  - The love letter: 1669-70
  - A lady writing a letter and her servant
  - The astronomer: 1668
  - The geographer: 1668-69
  - The guitar player: 1671-72

World events: an overview
of 17th century European art
- Rome
- Madrid
- Paris
- Delft
### 1239 Medical Journal Articles

**subject**
- Antibiotics 28
- Asthma 28
- Blood Proteins 27
- Cystic Fibrosis 1017
- Lung 28
- Meconium 31
- Pseudomonas Infections 34
- Pseudomonas aeruginosa 36
- Sputum 27
- Sweat 37

**date**
- 1974 163
- 1974-75 1
- 1975 189
- 1976 229
- 1977 199
- 1978 199
- 1979 255

**author**
- C F Doershuk 18
- H Shwachman 32
- L M Taussig 16
- L W Matthews 17
- N Halby 24
- R B Elliott 15
- R C Stern 20
- R F Winn 15
- T F Boat 25
- W J Warwick 15

**publisher**
- Acta-Paediatr-Scand 22
- Am-J-Dis-Child 23
- Am-Rev-Respir-Dis 35
- Arch-Dis-Child 52
- Clin-Chim-Acta 33
- J-Pediatr 73
- Lancet 81
- Monogr-Paediatr 34
- Pediatr-Res 40
- Pediatrics 45

### More Filters
- 811 more
- 900 more
Animal model for cystic fibrosis; pulmonary clearance of Staphylococcus aureus in mice treated with reserpine.

medlineNumber: 79229419
subject: Cystic Fibrosis, Lung, Reserpine, Staphylococcus aureus
author: O H Pivetta, D O Sordelli, R J Cassino
publisher: Life-Sci
date: 1979

Since it has been demonstrated that chronic administration of reserpine to rats produces CF-like alterations, we have studied the lung resistance to bacterial infections in animals treated with reserpine. Mice of the BALB/c inbred strain were injected subcutaneously with different doses of reserpine for 7 days; after, they were submitted to an infective aerosol containing Staphylococcus aureus in a nebulization chamber. With each pair of exposed animals, an individual value of the uncleared bacteria ratio (UBR) at 4 hours was obtained. Reserpinized animals showed a significant increase in UBR values when compared to control mice (p < 0.05 and p < 0.01 depending on the doses), suggesting an impairment of the lung antibacterial defenses. Although pharmacological doses of reserpine produce catecholamine depletion, we can not conclude that this action upon the nervous system is...
Some conclusions

- There is huge variation in the type of interfaces available
- Some of the interfaces are not very well designed
- Classification / browse
  - is helpful so the user can understand the extend of the collection
  - multiple classification is much better than simple classification
  - in single classifications, collections with different vocabularies tend to be in different classification subtrees, so we don’t need vocabulary mapping e.g. argricultural records vs visual images vs doctoral theses in OCLC demo
  - faceted search is better than multiple classification
Some conclusions (2)

• Search
  - Google is pretty much state of the art for search interfaces
  - all queries can be represented in free text, but a GUI helps users build advanced queries
  - Can do free text search and field specific search
  - We don’t need vocabulary mapping for free text search because you search all the text fields, only for field specific search

• We’ve spoken a bit about “community annotation”, but this does not just mean adding metadata fields, it means exploring data in different ways, representing relationships etc so different communities require different interfaces e.g. tours, quick overviews, image comparisons etc