Using XML and XSLT to Transform Access to Networked Electronic Resources

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Presentation outline

• Overview of “e-Reference Collection” development

• Impact of usability testing on XSLT customization

• Simultaneous searching and reference linking tips

• Potential impact of transaction log studies on service refinement
Brief history of CUL gateways

• Mann Library Gateway (1991)
• Cornell University Library Gateway (1998)
• E-Reference Collection (2001)
• Find Articles/Find Databases/Find e-Journals (2003- )
Catalysts for change

- Enhance with new functionality
- Migrate to new server
- Development partnership with Endeavor
- Release 2.0 of ENCompass
# New bells and whistles

**Existing Features**
- Search gateway metadata
- Go to database from search results
- Browse by subject
- Navigate to other CUL resources
- Authenticate users for restricted resources

**Plus**
- Search at article level
- Simultaneous search across multiple databases
- Reference linking
- Search for all e-journal titles
Stages of the project

- Metadata migration
- Interface development
- Usability testing
- Simultaneous searching
- Reference linking
- Authentication and proxying
- E-Journals database
Our focus today

- Metadata migration
- Interface development
- Usability testing
- Simultaneous searching
- Reference linking
- Authentication and proxying
- E-Journals database
Usability testing

• Summer-Fall 2002: development team sensed usability problems with the “out-of-the-box” ENCompass interface

• October 2002: “paper prototyping” with students and faculty

• November 2002: computer workstation focus groups (with students and faculty)
Mixing databases, journal articles and catalog records in a federated search interface confused users.
Browse functionality did not scale
Two main factors pushed reluctant customization

• Library's “e-Reference" brand invisible to users

• Standard ENCompass interface did not meet our needs
Find Databases has replaced the e-Reference Collection

The e-Reference Collection has migrated to a new system, Find Articles/Find Databases. Find Databases (this page) functions in a similar fashion to the e-Reference Collection, while Find Articles incorporates new functionality.

When searching on this page, use general rather than specific words (e.g., "philosophy" instead of "plato") in order to identify and connect to online reference resources and periodical indexes such as Agriocio, Proquest, or the MLA Bibliography.

General Interest and Reference

Almanacs, Dictionaries and
Encyclopedias
Biographies
Directories
Grants and Foundations
Greatest Hits

Arts and Humanities

Art and Architecture
History

Library Catalogs
Newspapers, Magazines and Current Events
Publishers Catalogs
Statistical Information

Music
Philosophy and Religion

Find Databases search/browse
You searched for census
No Previous Hits | Next 30 hits

1990 census lookup  [ more info ]
The 1990 Census Lookup server lists selected data from the summary tape files of the 1990 Census of Population and Housing. Included are data from 1990 Census Summary Tape File 3 (STF3) all socioeconomic and demographic variables and 1990 Census Summary Tape File 1 (STF1) basic demographic variables.

1992 census of agriculture  [ more info ]
Census of agriculture provides periodic and comprehensive statistics about agricultural operations, production, operators and land use. Includes all operators of U.S. farms or ranches (Division A, SIC 01-02) that sold or normally would have sold $1000 worth of agricultural products during the census year.

1997 economic census  [ more info ]
Description based on title screen, as of Dec. 15, 1999. Geographic area statistics on: wholesale trade; retail trade; real estate and rental and leasing; health care and social assistance; arts, entertainment, and recreation; accommodations and foodservices. Industry statistics on: mining and manufacturing in selected groups.

1997 NAICS and 1987 SIC correspondence tables  [ more info ]
Provides access to all of the major components of the 1997 NAICS Manual: definitions, correspondence tables, and an alphabetic index.

Find Databases search results screen
Find Databases > Statistical Information

American FactFinder [more info]
AmeriStat one-stop source for U.S. population data [more info]
ARL statistics [more info]
CenStats [more info]
Electric sales and revenue. [more info]
Eurostat electronic library [more info]
FactSearch (OCLC Web : 1984-) [more info]
FAEIS food and agricultural education information system [more info]
FAOSTAT Statistics Database [more info]
Federal aid to states for fiscal year .. [more info]
Fedstats [more info]

Find Databases browse display
Find e-Journals search/browse

**Searching for e-Journals:** This page allows you to search for the 20,000+ electronic journals licensed by the Cornell University Library.

**Browsing for e-Journals:** Clicking on one of the letter ranges below will display links to electronic journals whose titles fall within the specified range.

Browse List:

- Numbers
- A - Ac
- Ad - Ag
- Ah - Al
- Am
- An - Ap
- Ag - As
- At - Az
- B - Be
- Bg - Bn
- Bo - Bt
- Bu - By
- C - Can
- Cap - Cf
- Cha - Che
- Chi - Cm
- Cn - Col
- Com
- Con - Cor
- Cos - Cz
- D - Des
- Det - Dz
- E - Ec
- Ed - El
- Em - Es
- Et - Eu
- Ev - Ex
- F - Fin
- Fir - Fq
- Fr - Fx
- G - Gm
- Go - Gy
- H - Hf
- Hi - Hy
- I - Ii
- Im - Ink
- Inp
- Internal
- International A - International Journal of P
- International Journal of S - Inv
- Io - Iz
- J - Journal
- Journal A - Journal of Ch
- Journal of Cl - Journal of E
- Journal of F - Journal of L
- Journal of M - Journal of P
- Journal of Po
- Journal of Te
- Journal of Th - Ju
- K - Ky
- L - Le
- Lg - Lu
- M - Man
- Mar - Mec
- Med - Mig
- Mil - Mop
- Mor - My
- N - Net
- Neu - Nh
- Ni - Nz
- O - On
- Op - Oz
- P - Pe
- Pf - Pn
- Po - Pre
- Pri - Pt
- Pu
- Q
- R - Ret
- Reu - Rz
- S - Seg
- Sel - Sga
- Soc - Sp
- Sq - Sup
- Sup - Sy
- T - Te
- Th - Trau
- Trav - Tx
- U
- V
- Wa - Wil
- Win - Works
- World - Wy
- X - Z
Costs of breaking out of the box

- Custom XSLT requires local expertise
- More difficult for the vendor to support product
- Upgrades to product put responsibility on customer to integrate new ENCompass features
Benefits of breaking out of the box

• Completely custom appearance
• Ability to change interface based on user response
• Ability to add or remove features
Making simultaneous searching and reference linking work

- Z39.50 connection tips
- Sources of OpenURL connection failures
Find Articles primarily uses Z39.50 connections.
Z39.50 connection tips

• Began with EISI-gathered info, then fine tuned with A&I vendor info

• “Keyword” use attributes varied: 1016 (OCLC, ProQuest, RLG, WebSPIRS); 1017 (RLG); 1035 (EBSCO, Wilson); 4 (EBO—title only)

• Structure attributes tricky: phrase (Wilson); unspecified (EBSCO, PQ); word list (EBO, OCLC, RLG, WebSPIRS)
You searched for **neorealism** film

Art Index Retrospective
MLA Bibliography

This site is best viewed with **Netscape 6.2** and up or **Internet Explorer 5** and up.

Report a Problem Connecting | Send us feedback
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Find Articles retrieval screen
<table>
<thead>
<tr>
<th>Title</th>
<th>Source</th>
<th>Document Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alfred Hitchcock {reissued films}</strong></td>
<td>Films &amp; Filming no. 351 (December 1983) p. 18-21</td>
<td></td>
</tr>
</tbody>
</table>

Merged search results
Find Articles object record with OpenURL link

Title: A Touch of the Neorealist: An Interview with David Gordon Green
Author/Creator: Lucia, Cynthia
Subject(s): dramatic arts --film --interview --with Green, David Gordon --
Language: English
Document Type: journal article

Find it at Cornell
Z39.50 citation metadata used to build the OpenURL

Cineaste: America's Leading Magazine on the Art and Politics of the Cinema

Cineaste

26, no. 4 (2001 Fall): p. 13-17

0009-7004
Common OpenURL elements

- **aulast** -- first author's last name
- **issn** -- ISSN number
- **title** -- title of a bundle (journal)
- **atitle** -- title of an individual item (article)
- **volume** -- volume of a bundle
- **issue** -- issue of a bundle
- **spage** -- start page of an item in a bundle
- **date** -- publication date of the item or bundle
Resulting OpenURL

Compare this citation metadata to the previous


<MR773t>Cadernos-de-Lingua; 2001, 1(23), 53-67.</MR773t>
Another variable: OpenURL requirements of target site

Results

- 1 article found for: issn(0009-7004) and volume(26) and issue(4) and startpage(13)

1. **A touch of the neorealist: An interview with David Gordon Green**
   

   - [Text+Graphics](#)
   - [Page Image - PDF](#)
Sources of OpenURL connection failures

- Lack of granularity in A&I vendor metadata
- Ambiguous captioning in citations
- Variation in citation practice over time
- Journal-by-journal variation in citation elements
- Mismatch between citation metadata and target site requirements
For more information about reference linking

Using transaction logs to listen to our users

- Transaction log studies were conducted during summer prior to full-scale launch
- Studies revealed activity at the database level
- Studies identified databases with connection problems
- Ongoing studies are needed to influence service design modifications
Find Articles search activity, including connection failures
Concluding remarks

- Service/interface decisions responded to user needs from the outset
- Development work incorporated further user input to refine services and interface
- Ongoing user studies informed by transaction log analysis offer basis for additional improvements