

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)

Gateway to
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[Home](#) | [Library Catalog](#) | [e-Reference Collection](#) | [e-Journal Titles](#) | [My Library](#) | [Ask a Librarian](#) | [Individual Libraries](#)

e-Reference Collection

Quick Links 






eREFERENCE HELP

[Exit Session](#)

Use the search screen of [e-Reference Collection](#) to identify and connect to online reference resources and periodical indexes such as BIOSIS, ABI/Inform (ProQuest), or the MLA Bibliography. [\[Search Tips\]](#). Use the [CU Library Catalog](#) to find other resources, including individual e-journal titles, held by Cornell. Browse or search for e-journal titles in the [e-Journal Title List](#).

[Rights and Restrictions](#) to the Use of Licensed e-Reference Collection sources.

Search For: Show  Records per Page

Expand/ Collapse	Select	
	<input checked="" type="checkbox"/>	All of e-Reference A to Z
	<input type="checkbox"/>	Arts and Humanities
	<input type="checkbox"/>	General Interest and Reference
	<input type="checkbox"/>	Science and Technology
	<input type="checkbox"/>	Social Sciences



Mixing databases, journal articles and catalog records
in a federated search interface confused users

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e-Reference Collection

Quick Links 













eREFERENCE HELP

[Exit Session](#)

Use the search screen of [e-Reference Collection](#) to identify and connect to online reference resources and periodical indexes such as BIOSIS, ABI/Inform (ProQuest), or the MLA Bibliography. [\[Search Tips\]](#). Use the [CU Library Catalog](#) to find other resources, including individual e-journal titles, held by Cornell. Browse or search for e-journal titles in the [e-Journal Title List](#).

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Search For: Show Records per Page

Expand/ Collapse	Select	
	<input checked="" type="checkbox"/>	All of e-Reference A to Z
	<input type="checkbox"/>	Arts and Humanities
		Art and Architecture 
		History 
		Linguistics, Language and Literature 
		Music 
		Doctoral dissertations in musicology--online 

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

Gateway to
CORNELL UNIVERSITY LIBRARY

[Find Articles](#)

[Find Databases](#)

[Find e-Journals](#)

[ASK A LIBRARIAN](#)
email | chat | phone

Search for indexes and other reference resources in your subject area

[Library Gateway](#)

[Help](#)

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.

- Keyword(s)
 Phrase

[Search Tips](#)

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 Agricola, Proquest, or the MLA Bibliography.

[Numbers](#) | [A-B](#) | [C-D](#) | [E-F](#) | [G-H](#) | [I-J](#) | [K-L](#) | [M-N](#) | [O-P](#) | [Q-R](#) | [S-T](#) | [U-V](#) | [W-X](#) | [Y-Z](#)

General Interest and Reference

[Almanacs, Dictionaries and Encyclopedias](#)
[Biographies](#)
[Directories](#)
[Grants and Foundations](#)
[Greatest Hits](#)

[Library Catalogs](#)
[Newspapers, Magazines and Current Events](#)
[Publishers Catalogs](#)
[Statistical Information](#)

Arts and Humanities

[Art and Architecture](#)
[History](#)

[Music](#)
[Philosophy and Religion](#)

Find Databases search/browse

Gateway to
CORNELL UNIVERSITY LIBRARY

Find
Articles

Find
Databases

Find
e-Journals

ASK A LIBRARIAN
email | chat | phone

Search for indexes and other reference resources in your subject area

Library Gateway

New Search

Help

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

Gateway to
CORNELL UNIVERSITY LIBRARY

**Find
Articles**

**Find
Databases**

**Find
e-Journals**

ASK A LIBRARIAN
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Search for indexes and other reference resources in your subject area

Library Gateway

New Search

Help

[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

Gateway to
CORNELL UNIVERSITY LIBRARY

Find
Articles

Find
Databases

Find
e-Journals

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Search for electronic journals

Library Gateway

Help

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.

Keyword(s)

Search

Phrase

[Search Tips](#)

Browse List:

[Numbers](#) | [A - Ac](#) | [Ad - Ag](#) | [Ah - Al](#) | [Am](#) | [An - Ap](#) | [Aq - 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 - Fo](#) | [Fr - Fx](#) | [G - Gm](#) | [Go - Gy](#) | [H - Hf](#) | [Hi - Hy](#) | [I - Il](#) | [Im - Ink](#) | [Inp - Internal](#) | [International A - International Journal of R](#) | [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 Pl](#) | [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 - Soa](#) | [Soc - Sp](#) | [Sq - Suo](#) | [Sup - Sy](#) | [T - Te](#) | [Th - Trau](#) | [Trav - Tx](#) | [U](#) | [V](#) | [Wa - Wil](#) | [Win - Works](#) | [World - Wy](#) | [X-Z](#)

Find e-Journals search/browse

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

Gateway to CORNELL UNIVERSITY LIBRARY

Find
Articles

Find
Databases

Find
e-Journals

ASK A LIBRARIAN
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Simultaneous searching for articles in selected databases

Library Gateway

Help

Keyword(s):

Search

[Search Tips](#)

Searches will return up to 50 hits from selected databases. For a more complete list and advanced search capabilities, start with [Find Databases](#).

General

- ArticleFirst (1990-) [[more info](#)]
- Encyclopaedia Britannica online [[more info](#)]
- OCLC electronic collections online [[more info](#)]
- ProQuest: ABI/Inform and Periodical Abstracts (1999-) [[more info](#)]

Arts & Humanities

- Art full text [[more info](#)]
- Art index retrospective [[more info](#)]
- ArticleFirst (1990-) [[more info](#)]
- Avery index to architectural periodicals (1930-) [[more info](#)]
- Dissertation abstracts online (1861-) [[more info](#)]
- Linguistics and language behavior abstracts : LLBA (1973-) [[more info](#)]
- MLA bibliography (1963-) [[more info](#)]
- Philosopher's index (1940-) [[more info](#)]
- ProQuest: ABI/Inform and Periodical Abstracts (1999-) [[more info](#)]

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)

Gateway to
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Find
Articles

Find
Databases

Find
e-Journals

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Simultaneous searching for articles in selected databases

Library Gateway

New Search

Help

You searched for **neorealist film**

Merge/Show All Articles

Art Index Retrospective

[50 Hits](#)

MLA Bibliography

[11 Hits](#)

*

This site is best viewed with [Netscape 6.2](#) and up or [Internet Explorer 5](#) and up.

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Last update: April 20, 2003



Find Articles retrieval screen

Gateway to
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Find
Articles

Find
Databases

Find
e-Journals

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Simultaneous searching for articles in selected databases

Library Gateway

New Search

Help

You searched for **neorealist film**
No Previous Hits | [Next 50 hits](#)

Title: [A Touch of the Neorealist: An Interview with David Gordon Green](#)

Author(s): Lucia, Cynthia

Source: *Cineaste: America's Leading Magazine on the Art and Politics of the Cinema*, 26, no. 4 (2001 Fall): p. 13-17

Document Type: journal article

[From MLA bibliography (OCLC Web : 1963-)]

Title: [Actor-Become-Auteur: The Neorealist Films of Vittorio De Sica](#)

Author(s): Cardullo, Bert

Source: *Massachusetts Review: A Quarterly of Literature, the Arts and Public Affairs*, 41, no. 2 (2000 Summer): p. 173-92

Document Type: journal article

[From MLA bibliography (OCLC Web : 1963-)]

Title: [Alfred Hitchcock {reissued films}](#)

Source: *Films & Filming no. 351 (December 1983) p. 18-21*

[From Art index retrospective]

Merged search results

Gateway to
CORNELL UNIVERSITY LIBRARY

**Find
Articles**

**Find
Databases**

**Find
e-Journals**

ASK A LIBRARIAN
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Simultaneous searching for articles in selected databases

Library Gateway

Go Back

New Search

Help

Next

Title: A Touch of the Neorealist: An Interview with David Gordon Green
Author/Creator: Lucia, Cynthia
Source: **Cineaste: America's Leading Magazine on the Art and Politics of the Cinema**, 26, no. 4 (2001 Fall): p. 13-17
Subject(s): dramatic arts --film --interview --with Green, David Gordon --
Language: English
Document Type: journal article

[Find it at
Cornell](#)

Search [MLA
bibliography
\(OCLC Web
: 1963- \)](#)

Directly

*

Find Articles object record with OpenURL link

Find It At Cornell

Offers searches of library catalog for electronic and print journals and books. Links to online full text when available. [Help](#)

Citation Information

[Edit Citation](#)

Article Title: A Touch of the Neorealist: An Interview with David Gordon Green

Source: Cineaste: America's Leading Magazine on the Art and Politics of the Cinema (0009-7004); Volume: 26; Issue: 4; Date: 2001

Cornell University Online Catalog

[Find this Journal at Cornell \(by ISSN\)](#)

[Find this Journal at Cornell \(by Title\)](#)

Links to Full Text, Abstracts, Journals, etc.

article [Periodical Abstracts Research II](#)

Find It At Cornell display

Z39.50 citation metadata used to build the OpenURL

<MR773t>Cineaste: America's Leading Magazine on the Art and
Politics of the Cinema</MR773t>

<MR773p>Cineaste</MR773p>

<MR773g>26, no. 4 (2001 Fall): p. 13-17</MR773g>

<MR773x>0009-7004</MR773x>

<MR949a>26</MR949a>

<MR949b>4</MR949b>

<MR949c>13-17</MR949c>

<MR949e>2001 Fall</MR949e>

<MR949f>13</MR949f>

<MR949g>20010998</MR949g>

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

<http://128.84.158.87:8888/lfp/LinkFinderPlus/Display?&aulast=Lucia&atitle=A+Touch+of+the+Neorealist%3A+An+Interview+with+David+Gordon+Green&title=Cineaste%3A+America%27s+Leading+Magazine+on+the+Art+and+Politics+of+the+Cinema&volume=26&issn=0009-7004&issue=4&spage=13&date=2001&pages=13-17&stitle=Cineaste>

Compare this citation metadata to the previous

<MR773t>Journal-of-the-Acoustical-Society-of-
America; 1995, 97, 4, Apr, 2511-2524.</MR773t>

<MR773t>Cadernos-de-Lingua; 2001, 1(23), 53-
67.</MR773t>

Another variable: OpenURL requirements of target site

 Basic Search  Advanced Search  Topic Guide  Publication Search Marked List : 0 articles

Databases selected: PA Research II, ABI/INFORM Global, MarketResearch.com Academic

Results

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

Magazines

[Mark / Clear](#) all on page | [View marked articles](#)  [Full text articles only](#)

1. [A touch of the neorealist: An interview with David Gordon Green](#)
Cynthia Lucia. Cineaste. New York: Fall 2001. Vol. 26, Iss. 4; p. 13 (5 pages)

 [Text+Graphics](#)  [Page Image - PDF](#)

1-1 of 1

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

Blake, M.E., and Knudson, F.L. (2002),
“Metadata and reference linking”,
*Library Collections, Acquisitions, and
Technical Services*, Vol. 26 No. 3, pp.
219-230, available at: [http://lib-
www.lanl.gov/lww/articles/219_marl.pdf](http://lib-
www.lanl.gov/lww/articles/219_marl.pdf)
(accessed 30 September 2003).

Using transaction logs to listen to our users

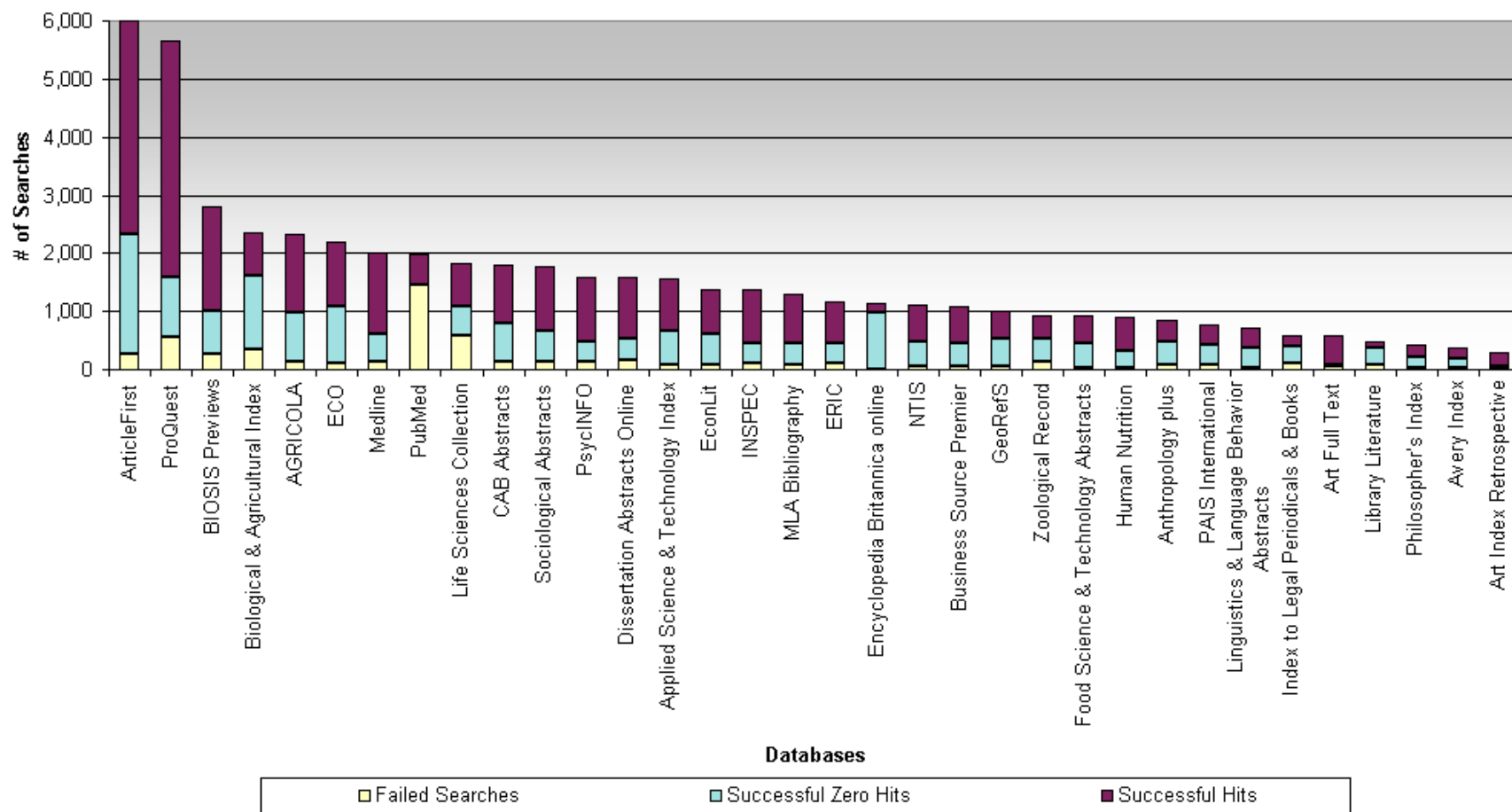
- Transaction log studies were conducted during summer prior to full-scale launch
- Studies revealed activity at the database level
- Studies identified databases with connection problems
- Ongoing studies are needed to influence service design modifications

Weekly Totals By Filename



Weekly Use of FD Search, FA Search and FD Browse

Find Articles - Database Searches



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