Project SimpLR

update for all staff meeting

Nov. 1, 2006
Nicole Hennig & William Reilly
Outline

1. Project SimpLR
   - our user needs study
   - improving search & discovery:
     A. Metadata Aggregator
     B. Metasearch
Outline

2. Metadata Aggregator Task Force

- combining disparate metadata
- vendors and marketplace
- interesting challenges
- our vision
User needs study
We wanted to find out what our students REALLY do.
So we studied their information-seeking habits in the context of real life.
In the past we’ve done usability tests of our systems, one by one.
Web Advisory Group

Usability Testing

The Web Advisory Group coordinates usability testing for web interfaces.

New home page [paper prototype]
New home page - usability test results: April 2004

Digital Library of MIT Theses
Digital Library of MIT Theses usability test results: June 2003

MIT Institute Archives web site
Archives web site usability test results: May 2003

The "Big Test" results: November 2002
The aim of this test was to learn how our students use our many web-based interfaces together. Included in the test were:

- web site: http://libraries.mit.edu/
- listings of databases + e-journals: http://libraries.mit.edu/vera
- web OPAC: http://libraries.mit.edu/barton
- individual databases listed in Vera
- test version of SFX menu screens in Alternative Press Index/Firstsearch test account
- "Ask Us - Live" (live chat reference service, no longer live at MIT)
- subject pages: http://libraries.mit.edu/subjects/
- The Information Navigator: http://libraries.mit.edu/tutorials/general/

MIT Libraries' GIS web site
GIS web site usability test results: September 2002

MIT Libraries' DSpace web site
DSpace web site usability results: August/September 2002
Marnie Beesebach (fsu) coordinated this test.
But that only tells us how each system works or doesn’t work for them, once they’ve found it and are using it.
So we turn to...
anthropology
If you can’t follow the users around all day in their environment, instead you can give them a “cultural probe.”
We called it the “photo/diary study.”
16 undergrads + 16 grad students volunteered to track their information-seeking behavior for one week.
in-depth interviews
Their photos, screen shots, and a diary of what they did helped them tell us the story.
goals, tasks, methods
grad student goals

- **research & thesis**
- current awareness
- conference presentations & publishing
- helping the lab function
- networking
- job search
undergrad student goals

- complete their course work
- current awareness
- participate in MIT clubs & social activities
- research
Goal categories:

* research & thesis
* current awareness
* conference presentations & publishing
  - helping the lab function
  - networking
  - job search
  - getting funding
  - personal development
  - course-related preparation
  - learn the basics [includes quick fact checking]
  - writing programming code
  - prepare teaching assignment
  - helping friends & family

Task categories:

* note-taking and organizing information
* browsing (online and in print)
* looking up known items
* looking up known items without complete info (partially-known)
* finding information on a topic (unknown items)
  - manipulating data sets
  - meeting and talking with experts
  - learning about software programs
  - checking web sites for current awareness/RSS feeds/tables of contents
  - planning for information gathering
  - quick lookups of basic info
  - find things by a particular author
  - database discovery (finding which database to use)
  - collecting data
  - locating data sources and data sets
  - checking job listings
Methods used:
(items in bold were done more than once)

- search Google
- search Google Scholar
- used software to format and analyze data (Matlab, Excel, Acces, Stata)
- use software to organize and manage notes
- use software to organize citations
- used MIT Libraries web site
- used MIT Libraries GIS web site
- search Vera
- browse by title in Vera
- browse databases by subject in Vera
- used subject list of databases in Vera
- search other library catalogs (HOLLIS, etc.)
- go directly to a known web site by typing the URL
- meet with people
- phone calls to people
- go to a library and use a print resource
- go to a non–MIT library to use a print resource
- go to a library and use microfilm
- email people
- email author of a paper to ask for the paper
- consult with advisor
- create a research strategy
- search within a document
- use Wikipedia (used to find synonyms before a search in some cases)
- refer to books in personal library
- refer to old course or lab notes
- use software help screens
- browse current print journals in libraries
- browse table of contents of online journals
- browse stacks
- search e–journal package [note: this should also appear as a browse option, so added below]
- browse ejournal package
- search a citation database
- search other subject databases listed in Vera
- visit a library and ask for help
- take photographs
- look at references of a known article
“known-item searching”

“topical discovery”
Some things we observed.
They had a tendency to start with sources they were familiar with.
and with sources recommended by a trusted network of people.
not librarians
also common:

- figuring it out themselves
They used a wide variety of sources.
Google

library databases

textbooks

MIT Open Courseware

social science data sets

e-books

Google Scholar

Amazon

Google Print

Google maps

personal libraries

web sites of other universities
Google library databases
e-books
old course notes
Google Scholar
lab notebooks
personal libraries
MIT Open Courseware
web sites of other universities
social science data sets
Amazon
personal contacts (people)
often they began with Google.
Almost everyone had a few favorite resources.
They tended to reuse their favorites, rather than try new ones.
Many students did their TOPICAL discovery in non-library sources.
then came to the library to look up the items they found.
Looking up known items in our systems usually worked well.
Students frequently needed to discover information about a topic.
and that didn’t always work so well.
1. trouble with knowing where to look

2. trouble with effectively searching the sources they used
They spent a large amount of time with varying degrees of success.
Sometimes used “brute force” methods.

VERY time consuming
from our point of view as librarians

“if they had only known about X!”

(fill in the blank)
From their point of view:

They often thought that’s how it had to be.
From our library survey:

Users want us to *simplify* search, felt there were too many starting points
Too many starting points
Too many starting points
Too many starting points
Too many starting points
Too many starting points
so what are we going to do?
Priorities

- integrate search & improve discovery
- put ourselves where users are
- add trust & community features
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- integrate search & improve discovery
- put ourselves where users are
- add trust & community features
Project SimpLR
Project SimpLR

Purpose: To build a simplified, integrated, search and discovery interface for accessing the MIT Libraries resources.

Name: Project SimpLR: Simplified search & discovery of Library Resources (pronounced, “simpler”)

Description: The Spring 2006 user needs report and the Library Survey resulted in a number of findings concerning problems that our users have with our current interfaces for search and discovery of library resources. The highest priority need from both projects was determined to be this:

Make discovery and search easier and more effective.

libstaff.mit.edu/simp
2 technologies for
2 kinds of content
A. Local content (we own it)

- catalogs (Barton + Vera)
- MIT research (DSpace)
- image collections
- archives
- web site pages (subject guides and more)
- future digital repositories
B. Remote content (we license it)

- databases
- e-journals
- e-books
A. Local content:
a metadata aggregator with faceted browsing

B. Remote content: Metalib + X-server
for federated searching of small sets of resources, strategically placed
1) Task Force: Metalib/X-server project planning

Develop functional requirements for Metalib + X-Server in a targeted, specific context, in order to allow for cross-search of specific appropriate small sets of our licensed resources.

- Nicole Hennig, chair
- Rich Wenger
- Darcy Duke
- Maggie Bartley
Business Database Advisor

Management Databases: Business Faculty & Practitioner Research

**ABI/INFORM Global**
Full text articles and citations to articles in business research journals.

**Business Source Premier**
Contains citations plus many full text articles in business research journals.

**Conference Board Research Database**
Full text research reports on current issues in management and the US and global economies.

**Harvard Business School Case Studies Index**
Search for HBS Case Studies and other publications at this site. Note: Sloan students should check with CopyTech about purchasing HBS Case Studies.

**SSRN: Social Science Research Network**
A database of citations to articles.

Business school faculty, other academic researchers, and professional practitioners conduct research to solve problems, explore new ideas, and generate new knowledge. Their research is reported in business research journals.

Some business journals cover a range of topics (e.g., *MIT Sloan Management Review*) while others are devoted to subfields (e.g., *Journal of Management Information Systems*). Articles in business research journals are good sources for:

- evaluations of best practices
- analyses of common problems
- emerging management issues
After

Business Database Advisor

Management Databases:
Business Faculty & Practitioner Research

QuickSearch

Search [all fields] for

What am I searching?
The QuickSearch will cross-search the following databases. For more precise searching, use the native interface of each database.

- **ABI/INFORM Global**
  business research, marketing, case studies and more
- **Business Source Premier**
  business research, marketing, case studies and more
- **Web of Science**
  business, industrial engineering, operations research, human resources

Other important databases

These databases cannot be included in quicksearch for technical reasons.

Search each one in its native interface below.
2) Task Force: Metadata Aggregator Requirements

Develop high-level functional requirements for acquiring a Metadata Aggregator with faceted browsing (and also possibly trusted network features, such as user contributed reviews and/or user tagging) in order to bring together metadata from what are currently separate systems: Barton, Vera, and DSpace to start, with the possibility for other systems to be included in the future, such as Image Collections, GIS and VDC records, public web site pages and other future metadata repositories.

- William Reilly, chair
- Beth Brennan
- Ellen Duranceau
- Tracy Gabridge
- Nicole Hennig
Project SimpLR Steering Committee:

- MacKenzie Smith
- Steve Gass
- Marilyn McSweeney
- Nina Davis-Millis
- Nicole Hennig
aggregation goals

- fewer starting points
- simplification
- increased browsability
- improved discovery
MIT Libraries
Books, ebooks, journals, movies and music, government documents, and more

Search Advanced Search

Search for words:

Examples: active learning
Facets improve topical discovery.

<table>
<thead>
<tr>
<th>Brief View</th>
<th>Full View</th>
<th>Sort By:</th>
<th>Relevance</th>
</tr>
</thead>
</table>
| 1. **Rising waters [videorecording] : global warming and the fate of the Pacific Islands**  
**Author:** Torrice, Andrea.  
**Published:** c2000.  
**Format:** Book; Video cassette  
**D.H. Hill Library**  
QC981.8 .G56 T67 2000  
Media Collection (2nd floor, West Wing)  
Available  
QC981.8 .G56 T67 2000 <study guide  
Media Collection (2nd floor, West Wing)  
Available  
| 2. **Dead heat : global justice and global warming**  
**Author:** Athanasiou, Tom.  
**Published:** c2002.  
**Format:** Book  
**Natural Resources Library**  
QC981.8 .G56 A87 2002  
Stacks  
Available  
| 3. **Global warming in the 21st century**  
**Author:** Johansen, Bruce E. (Bruce Elliott), 1950-  
**Published:** 2006.  
**Format:** Book  
**Natural Resources Library**  
QC981.8 .G56 J643 2006 V.1  
Stacks  
Available  
QC981.8 .G56 J643 2006 V.2  
Stacks  
Available  
QC981.8 .G56 J643 2006 V.3  
Stacks  
Available  
**Published:** c1990.  
|
[ william's slides]
Project SimpLR vision
MIT Libraries
Books, ebooks, journals, movies and music, government documents, and more

Search [Advanced Search]

Search for words:

Examples: active learning

Search
Broader terms
Natural disasters
  Storms
  Cyclones

Related terms
  Typhoons
  Tornadoes

MIT web sites
  Earth sciences subject guide
  EAPS Department: Earth, Atmospheric, Planetary Sciences
### Facets

#### Subject
- Emergency management (220)
- Civil defense (91)
- Safety measures (77)
- Prevention (67)
- Terrorism (59)

#### Availability
- Online (456)
- In Library (354)
- Checked out (224)
- In storage (25)

#### Keyword / user tags
- disasters (230)
- emergencies (12)
- terror (67)
- politics (25)
- weather (89)
- course 12.307 (25)

#### Date
- 2000 - present (456)
- 1990 - 2000 (13)
- 1980 - 1990 (123)
- 1970 - 1980 (67)
- 1960 - 1970 (55)

#### Type
- MIT Research: DSpace (9)
- Web pages (25)
- Images (43)
- Online resources (16)
- Handbooks, manuals, etc (38)
- Conference proceedings (17)
- show more....

#### Format
- Book (374)
- Online (138)
- Microform (135)
- Software and Multimedia (10)
- Videos and DVDs (3)

#### Physical location / library
- Online (456)
- Aero/Astro (13)
- Barker (123)
- Dewey (67)
- Rotch (55)
- Science (203)
- show more...

#### Geographic Region
- United States (353)
- California (10)
- New York (State) (5)
- Washington (D.C.) (5)
- Alabama (4)

#### Language
- English (512)
- Spanish (3)

#### Author
- United States. General Accounting Office. (29)

#### Show more....

Broader terms and related terms

Broader terms
- Natural disasters
- Storms
- Cyclones

Related terms
- Typhoons
- Tornadoes
- More...

MIT web sites
- Earth sciences subject guide
- EAPS Department: Earth, Atmospheric, Planetary Sciences
## Relevance ranking

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Author</th>
<th>Published</th>
<th>Format</th>
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<th>Availability</th>
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### Look this up in: Amazon, Google print, Worldcat, Wikipedia, MIT Press
“send search to”

**Article databases:**
sends user’s search terms + related/broader terms to **Metalib** to help select appropriate sets of databases
Trust and evaluation features

- reviews from publishers
- user tagging, comments, ratings
- tables of contents
- journal citation reports
- book cover images
- popularity rankings (based on how often items are circulated or viewed electronically)
working on prioritizing these based on user needs
some things we can do on the way

- Provide RSS feeds

- Consider community features in Barton

- Offer community features in blogs that link to Barton

- send search to....

- did you mean... (spell check)

- Offer tools like LibX - embeds our links in Amazon, Google Scholar and other places
some things we can do on the way

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- Social bookmarking
- Tagging
- Comments
- Reviews
- Rating
- Popularity rankings
  (circ stats and e-resource usage stats)
LibX links directly to the Barton record for this title
Longer term future

- open APIs

- so that our systems can be embedded in course management systems

- open our systems for use by other systems
Successful products **extend** the work practice.

They support the way users want to work.

Contextual Design : A Customer-Centered Approach to Systems Designs

by Karen Holtzblatt
We may be lifting out the catalogue discovery experience, but we are then re-embedding it in potentially multiple discovery contexts, and those discovery contexts are being changed as we re-architect systems in the network environment.

- Lorcan Dempsey, OCLC Research

The Library Catalogue in the New Discovery Environment: Some Thoughts
http://www.ariadne.ac.uk/issue48/dempsey/
Key reports with similar findings & recommendations to ours

Rethinking how we provide bibliographic services for the University of California. Bibliographic Services Task Force. December 2005.
http://libraries.universityofcalifornia.edu/sopag/BSTF/Final.pdf

Perceptions of Libraries and Information Resources. OCLC Reports, 2005.
http://www.oclc.org/reports/2005perceptions.htm


The eXtensible Catalog Project: an open-source online system that will unify access to traditional and digital library resources. Jennifer Bowen and David Lindahl, University of Rochester, 2006.
http://www.extensiblecatalog.info/?page_id=7