



Coming to Terms with Search: Re-implementing MetaLib at Notre Dame

Introduction

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- Special Thanks to the Tom Lehman, the Web Presence Improvement Team, and the MetaLib Implementation Team

Overview

Our Implementation Process

- I. Assessment/Defining the Problem
- II. Identifying Solutions
- III. Assessing and Fixing MetaLib to Perform Better
- IV. Post Re-integration Analysis
- V. Responses and Lessons
- VI. Future Issues

I. Assessment – WPIT, WPIT Good

- Web Presence Improvement Team
- Purpose
 - To ensure the Libraries' Web presence is:
 - easy for students to use for learning
 - easy for teachers to use for instruction
 - easy for scholars to use for research
- Tools
 - Focus group interviews, surveys, log file analysis, card sorting, usability studies, etc.
- Composition
 - Volunteer, public services, technical staff, and key stakeholders for specific projects

Assessment Summer '06

- Two tiered process
 1. Logfile Analysis
 - scanning web log files to determine most visited pages on the website
 2. Defining User Tasks and Performing Usability
 - determining basic tasks that users should be able to do and then perform usability to test how well our website facilitates those tasks

1. Assessment – Logfile Analysis

April 2005 - March 2006 Top Visited Links	
Hits	Link Label
53,045	Find Articles by Subject
52,753	eJournal Locator
45,583	eReserves
29,537	Find Resources by Subject -> More
24,789	eJournal Collections
17,978	WorldCat
17,027	Find Articles -> More
11,867	Inside ND Libraries -> More
11,624	Library Services -> More
9,201	Reference Shelf -> More
9,142	Interlibrary Loan

The screenshot shows the University of Notre Dame Libraries website interface. Red arrows from the table point to the following sections:

- Find Articles by Subject**: Points to the "Find Articles" section in the "Research Tools" area.
- eJournal Locator**: Points to the "eJournal Collections" section in the "Research Tools" area.
- eReserves**: Points to the "Course Reserves" section in the "Library Services" area.
- Find Resources by Subject -> More**: Points to the "Find Resources by Subject" section in the "Research Tools" area.
- eJournal Collections**: Points to the "eJournal Collections" section in the "Research Tools" area.
- WorldCat**: Points to the "WorldCat" link in the "Find Books" section.
- Find Articles -> More**: Points to the "Find Articles" section in the "Research Tools" area.
- Inside ND Libraries -> More**: Points to the "Inside ND Libraries" section in the "Library Services" area.
- Library Services -> More**: Points to the "Library Services" section in the "Library Services" area.
- Reference Shelf -> More**: Points to the "Reference Shelf" section in the "Research Tools" area.
- Interlibrary Loan**: Points to the "InterLibrary Loan" section in the "Library Services" area.

2. Assessment - Tasks

- The website should help a user perform the following tasks:
 1. Find books on a topic
 2. Find articles on a topic
 3. Given an article citation, identify library holdings
 4. Find the hours library units are open
 5. Renew a book online
 6. Find how to do self-initiated interlibrary loan
 7. Get to E-Reserves

Assessment – Tasks (cntd.)

8. Find contact details for a librarian
9. Get to a database such as Web of Science
10. Find a list of best online resources for information on a topic
11. Get to the search page for an ejournal collection such as JSTOR

Assessment – Usability Process

- Tests based on identified tasks
 - Task – find articles on a topic
 - Question – find three journal articles on AIDS in the developing world.
- Score questions based on performance
 - Quantifiable scale for later comparison
 - 1 = Accomplished on first try
 - 2 = Accomplished after two or more tries
 - 3 = Did not accomplish task

Assessment – Usability Results

WPIT Usability Test Results

Summary of the results of usability testing conducted by WPIT during the third and fourth weeks of April 2006.

Undergrads (9)	Grad Students (5)	Faculty (2)	Question
1.33	1.4	1	1: Find three books discussing modern French phenomenology.
2.22	1.8	2.5	2: Find three journal articles on AIDS in the developing world
2.11	1.8	2.5	3: Does the library have [article citation] in History and Theory
1.44	1.2	1.5	4: What time does the Architecture Library close on Friday, May 12, 2006
1	1.4	1.5	5: Find the page that tells how to renew books
1.44	1.4	2	6: Find the page that tells how to recall books
2.11	2.2	2	7: Find the page that tells how to submit your own Interlibrary Loan requests on WorldCat

- Any score above 2 means function unusable
 - Worst Ratings
 - Finding Articles
 - Interlibrary Loan

Assessment – Combining the Results

- Logfile analysis
 - 6 out of top 10 (5 out of top 5) most visited pages have to do with finding articles
- Usability
 - Finding articles one of two unusable functions on website
- Finding articles identified as top priority

Background: ND Libraries Web Environment

- ND Library web environment
 - Rich infrastructure, database driven website
 - MyLibrary portal
 - Mix of vendor based products (Aleph, ILLiad, MetaLib, SFX) and Open Source (MyLibrary, eReserves)
 - MetaLib accessed through deep link searches, placed on 60+ subject pages

Background: The Old Way of Finding Articles

The screenshot displays the University of Notre Dame Library website interface. On the left, there are navigation menus for 'Library Services', 'Inside ND Libraries', and 'Research Tools'. A sidebar contains 'Find Articles by Subject' with categories like 'General and Multidisciplinary', 'Arts and Humanities', 'Social Sciences', and 'Science and Technology'. The main content area features a search bar, a 'QuickSearch for Theology and Religion' section with a 'Go' button, and a list of 'Recommended Resources' including 'ATLA religion database' and 'Catholic periodical and literature index'. The footer includes contact information and the date 'Site Last Modified: Tuesday, January 18, 2005'.

II. Identifying Solutions - QuickSearch

- Considered MetaLib (QuickSearch) potential solution
 - MetaLib was an obvious potential solution because MetaLib finds articles from a single box
 - QuickSearch had unfulfilled potential in our implementation
- Build collaborative team (WPIT/MetaLib)
 - Added key MetaLib Implementation Team players to WPIT for duration of project
 - Working with key stakeholder groups

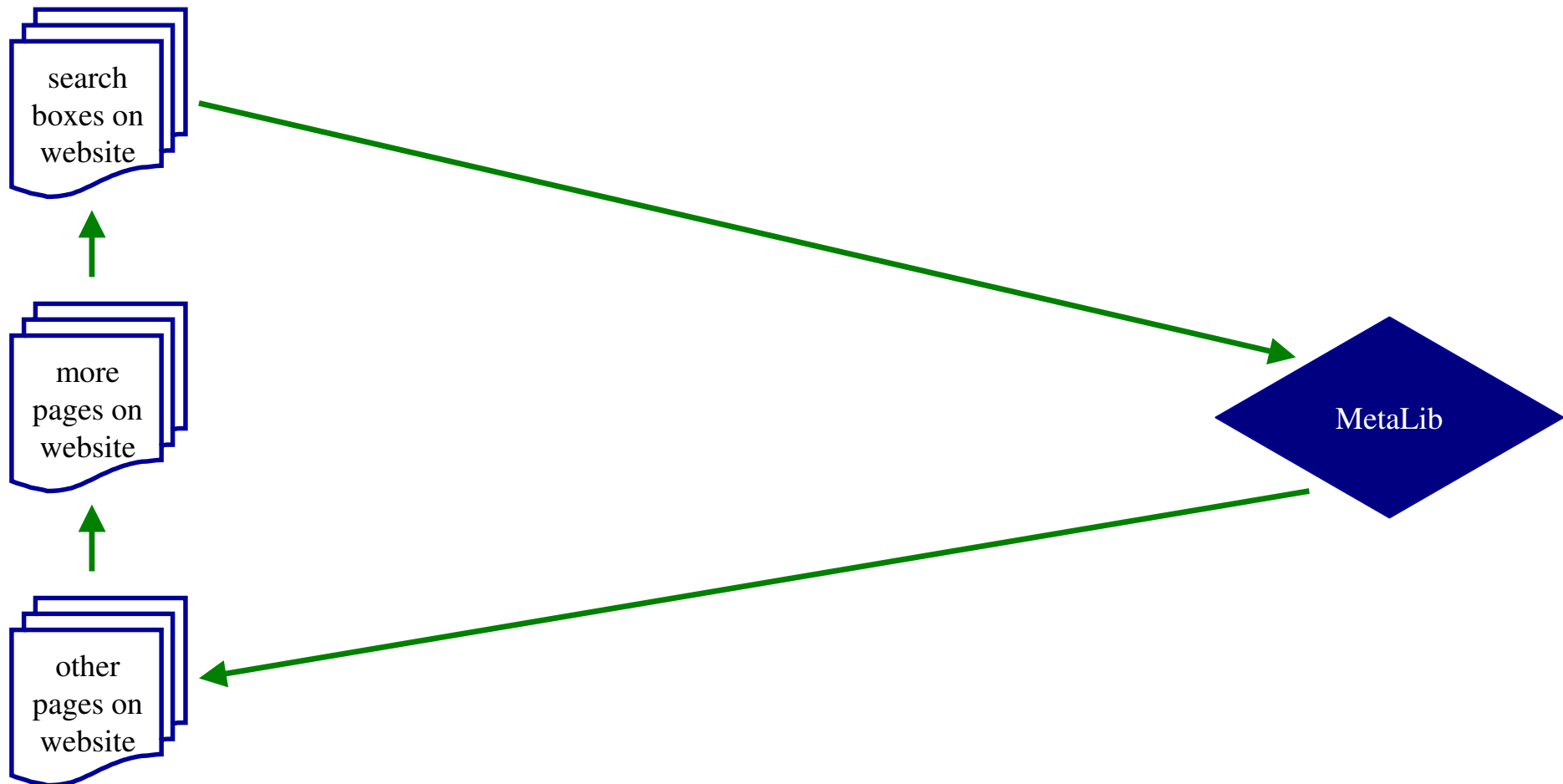
Background: MetaLib at the ND Libraries

- Midgrade Implementation of MetaLib
 - Deep links method, not out of box, not XServer
 - Reduced Functionality
 - Metasearch, Search history, eShelf
 - IP Access, not portal implementation
 - Session based
 - Proxied for off-campus
 - Access works like any other eResource
 - Search boxes placed on subject pages initially

III. Assessing and Fixing MetaLib

- Issues with MetaLib 3.13
 - Problems with the System/Resources
 - Phrase searching the default
 - Some resources confusing to users or returned thin/poor data
 - Search statistics – lots of zero hits
 - Problems with Existing Integration
 - Poor navigation between system and website
 - Stateless integration, MetaLib unaware of actions on website and vice versa
 - Hard to find
 - Buried on specific subject pages
 - No single, easy to locate, entry point

The Old Integration



Re-implementing MetaLib in Phases

- Phase I: Initial Adjustments
- Phase II: Fixing Search
- Phase III: Enhancing Navigation
- Phase IV: Improving Visibility

Phase I: Initial Adjustments

- Easy to make changes that help improve the overall experience
- Centralize quality control
 - Coordinated testing
- Enhancing the quality of results
 - Poor performing resources removed:
 - Limited article content
 - ‘Thin’ citation data returned
 - Dead end SFX links
 - Search and link resources

Phase II: Fixing Search

- For most z39.50 resources, inserting the word AND made the resource search in a keyword style
- Scripted search pre-processing
 - adjust search string being sent to MetaLib
 - create boolean AND
 - ‘seasonal affective disorder’ to ‘seasonal AND affective AND disorder’
 - quotes send search as phrase
 - Remove stop words
- Re-tooling some MetaLib XML Gateway search programs
 - Rewrite key search programs
 - Find programs only
 - Pulled additional resources which could not handle the adjusted searches until we could fix them

Phase III: Improving Navigation

- Sharing & Building Bridges
 - Maintaining “state” between website and MetaLib through cookies and name/value pairs



Phase III: Improving Navigation

- Data that is stored in cookies to maintain ‘state’
 - Original search phrase
 - Location of page user started from
 - MetaLib session id passed in name/value pair
 - Databases selected (for advanced search)
 - Subject that user selected or started from

Improving Navigation (cntd.)

- Navigation script reads cookies and directs user accordingly:
 - new search, back to search page
 - advanced search, to the advanced search for the related subject
 - refine search, to the advanced page, but query entered into box
 - if user has cookies off, navigation script uses defaults in a configuration file

Phase IV: Improving Visibility

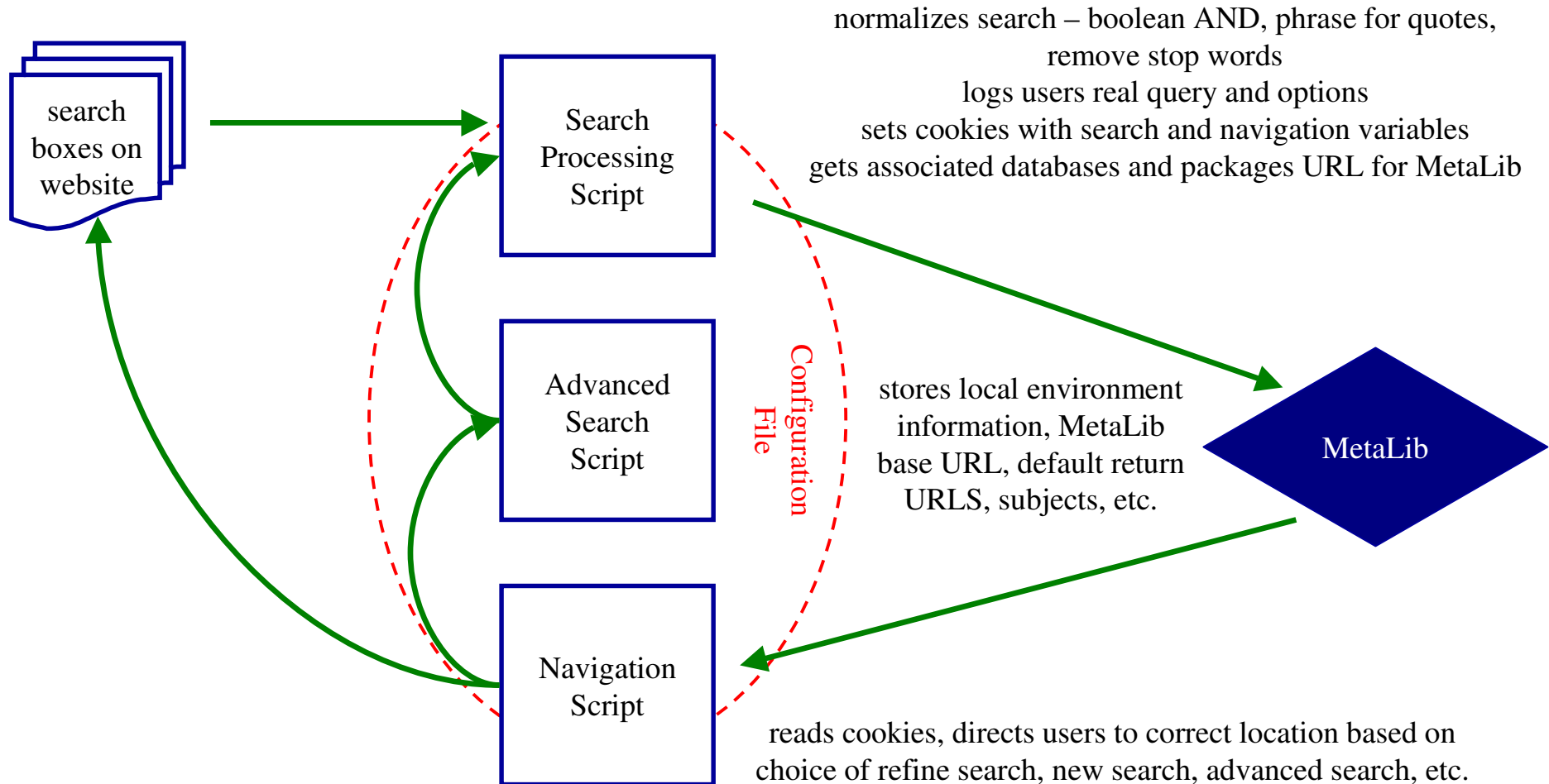
- Added 'QuickSearch' to all subject pages
- Made 'QuickSearch' more prominent by placing search box on page that links from 'Find Articles on a Topic'
- Give users simple choices, 5 general topics
 - Asked Reference Dept. to help select best General & Multidisciplinary resources

The New Way of Finding Articles

The screenshot displays the University of Notre Dame Libraries website interface. At the top, the navigation bar includes the University of Notre Dame logo and the text "UNIVERSITY LIBRARIES". Below this, there are several columns of content:

- Left Column:** Contains a "Read the latest issue of" section with a "Getting Help" menu listing services like "Ask A Librarian" and "Connecting From Home".
- Second Column:** Features a "Find Articles by Keyword, or by" section with an "Article QuickSearch" box and a "QuickSearch" field. Below this is a "Show database" button.
- Third Column:** Shows a "Find Articles in" section with a "Select a subject from" dropdown menu listing various disciplines such as "Africana Studies", "American Studies", "Anthropology", "Architecture", "Art, Art History", "Arts and Humanities", "Asian Studies", "Biology and Life Sciences", "Business (General)", "Business, Finance", "Business, Management", "Business, Marketing", "Catholic Studies", "Chemistry", "Economics", "Education", "Engineering (General)", "Engineering, Architecture", "Engineering, Civil", "Engineering, Chemical", "Engineering, Electrical", and "Engineering, Environmental".
- Right Column:** Displays search results for "Psychology (7 Resources)". It includes a search bar with the text "QuickSearch for Psychology :", a "Go" button, and links for "What's QuickSearch?" and "Advanced Search". Below the search bar are links for "About This Subject", "About Icons", and "Acceptable Use Policy". The results list includes:
 - Academic search premier (EBSCO):** Coverage: Inclusive coverage: 1984 to present. "The world's largest scholarly, multi-disciplinary full text database"--About page. It also includes indexing and abstracts for additional periodicals.
 - Current index to statistics:** Coverage: 1974-. Contains bibliographic citations to statistical books and articles in more than 1,000 journals.
 - Dissertation abstracts online:** Coverage: 1861- (Indexing); 1980- (Abstracting Dissertations); 1988- (Abstracting Theses). Provides information about doctoral dissertations and master's theses, with subject, title, and author access to almost all American dissertations accepted at an accredited institution since 1861. Dissertations from all institutions since 1997 have 24-page previews freely available without restriction. Masters theses selectively indexed since 1962. Includes citations for thousands of Canadian dissertations and an increasing number of papers accepted in institutions abroad. Professional (e.g., M.D., LL.D.) and honorary degrees not included. Access info: Access to full text (PDF) of Notre Dame dissertations since 1997, restricted to users with valid Notre Dame NetIDs. Look for and click on the "Free Download" button on the search results screen.
 - Expanded academic ASAP:** Coverage: 1980-. Provides indexing, abstracts, and selected full text for 3,500+ scholarly journals and general interest periodicals embracing all academic disciplines (citations only for The New York Times). Full text for some titles may be subject to publisher-imposed embargo periods. Usage info: Licensed for 5 simultaneous users.
 - PsycARTICLES:** Coverage: 1987-. Provides full-text access, citations and abstracts to articles from journals published by American Psychological Association and affiliated organizations.

The New Integration



Some Notes on the Config File

- Configuration file contains a subject id that is mapped to multiple databases and their MetaLib ids, this makes it possible to change database selections related to a subject id in only one location
- Configuration file portable to other institutions because it contains local URLs and subject mappings, all you need is a webserver, a text editor, and a web admin that can implement PERL scripts

New Search and Navigation at Work

UNIVERSITY LIBRARIES
UNIVERSITY LIBRARIES
UNIVERSITY LIBRARIES
UNIVERSITY LIBRARIES

Info for students, faculty, visitors, or friends

ND CATALOG Search ND Libraries catalog for [] Go

Getting Help
Library Services
Inside ND Libraries
Research Tools
ASK A LIBRARIAN

Hesburgh Library

General and Multidisciplinary

Didn't find what you need with QuickSearch? Please try these recommended resources in this subject area.

Recommended Resources

Academic search premier (EBSCO)
Coverage: Inclusive coverage: 1984 to present.
"The world's largest scholarly, multi-disciplinary full text database"--About page. It also includes indexing and abstracts for many titles.

Biography resource center
Coverage: Description based on site as viewed Oct. 18, 2000.
Database of biographical information on more than 200,000 people from throughout history, around the world, and across all disciplines and subject areas, containing approximately 300,000 biographies from Gale sources and full-text articles from hundreds of periodicals.

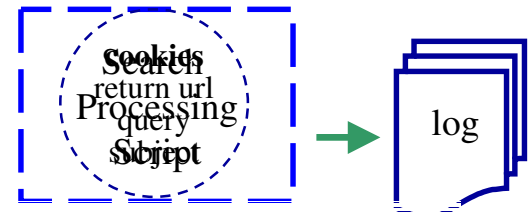
Book review digest
Coverage: 1983-
Indexes and abstracts reviews of English-language adult and juvenile fiction and non-fiction titles; reviews are selected from journals in the humanities, sciences, social sciences and library review media. Usage info: Licensed for one simultaneous user.

CQ researcher
Coverage: 1991-
Covers the most current and controversial issues of the day with summaries, pros and cons, bibliographies and more. Usage info: Licensed for 10 simultaneous users.

Dissertation abstracts online
Coverage: 1861- (Indexing); 1980- (Abstracting Dissertations); 1988- (Abstracting Theses).

QuickSearch combined results

the seasonal affective disorder
genmul



seasonal AND affective AND disorder

&ckbox=NDU02575&ckbox=NDU03907
&ckbox=NDU03177&ckbox=NDU02804

Ask a Librarian

Cancel

View
View
View
View
View



IV. Post Re-integration Analysis

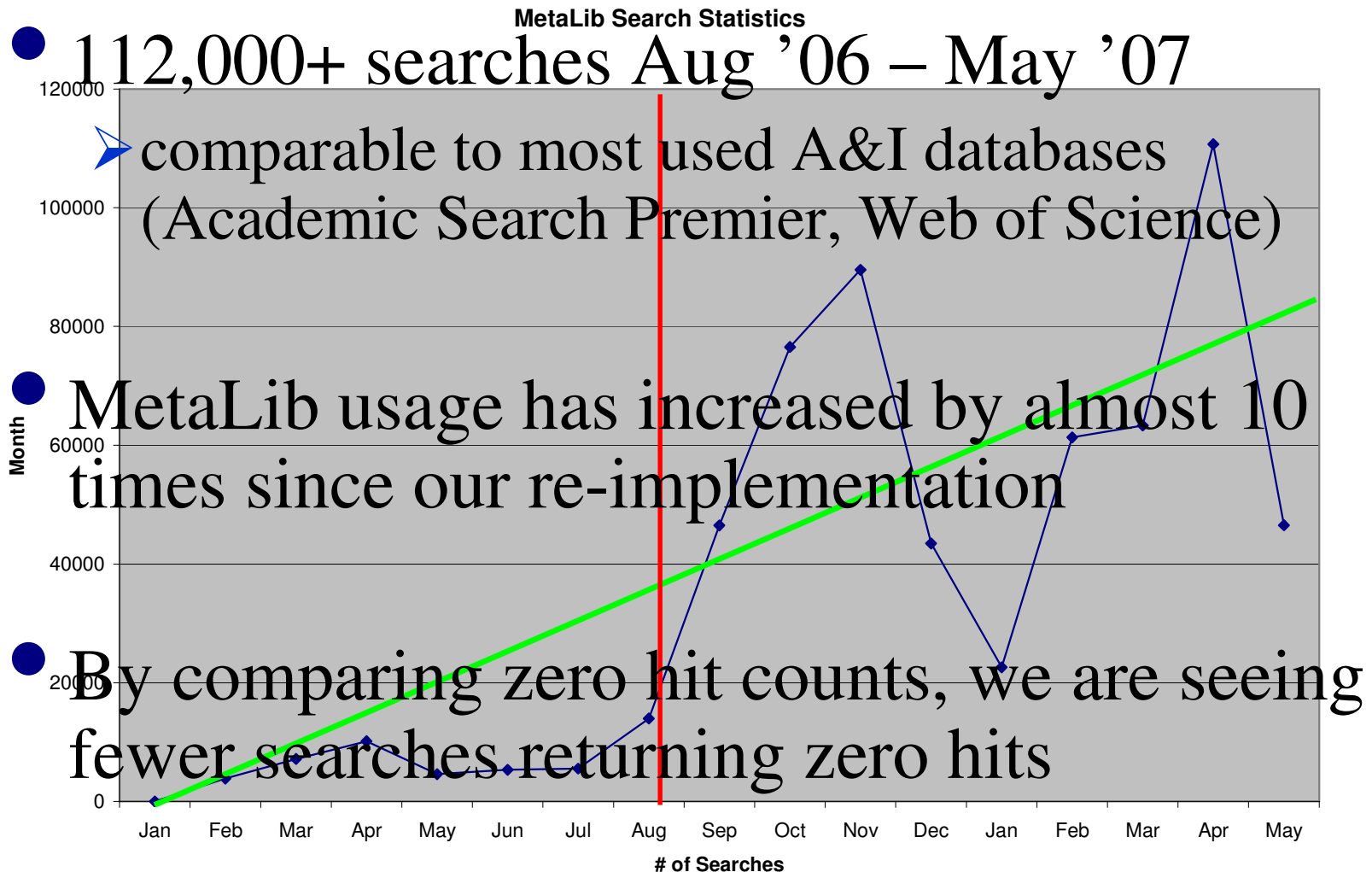
- Usability (performed before launch)
- System Statistics and Comparison
- User Survey
- Re-adjusting after feedback collection

Usability Testing on New Integration

- We tested the new interface and retested the old interface and then compared results

Usability Testing		
	Old Interface (Gold)	New Interface (Blue)
Undergrad	2.14	1.75
Grad	1.29	1.21
Faculty	1.33	1.36

Usage Statistics



Find Articles QuickSearch Stats

Distribution of Find Articles QuickSearches
55% of all MetaLib Searches Originate from Here

Business & Economics
1%

UNIVERSITY LIBRARIES UNIVERSITY OF NOTRE DAME

Info for students, faculty, visitors, or friends ND CATALOG Search ND Libraries catalog for Go

Hesburgh Library > Find Articles > Article QuickSearch

Find Articles on a Topic
By Keyword, or by Article Title

Article QuickSearch Top Article Databases Article Databases by Subject Newspaper Databases

For more search options, use one of the [Top Article Databases](#)
For in-depth results on specific subjects, search individual [Article Databases by Subject](#)


QuickSearch: Go **Advanced search**

General and Multidisciplinary Social Sciences
 Arts, Architecture and Humanities Science and Technology
 Business and Economics

[+ Show databases I am searching](#) Not sure where to start? [Ask a Librarian](#)

Survey

- In the Fall of '06, we implemented a survey to determine the value of MetaLib (QuickSearch) to our users
 - incentive was a Notre Dame sweatshirt
 - option to take survey appeared the first time a user entered a search during a session

UNIVERSITY LIBRARIES  UNIVERSITY OF NOTRE DAME

Complete a quick 5 minute survey about QuickSearch and be entered to win a \$30 gift certificate to the Hammes bookstore.

[Go to Survey](#) | [No Thanks](#)

[University Libraries of Notre Dame](#) - Notre Dame, IN - 46556
Telephone: 574.631.6258 Fax: 574-631-6772 [Contact Us](#)

Survey (cntd.)

- Notre Dame is roughly 11,000 FTE
- 422 responses, about 4% of total population, 81% of respondents were undergraduates
- How often have you used QuickSearch?
 - 91% indicated more than once
 - 64% indicated 4 or more uses
- Have you used articles from QuickSearch in a paper?
 - 86% indicated they had
- How useful has QuickSearch been for you?
 - 81% found at least moderately useful
 - 32% found it very useful

Survey (cntd.)

- The survey told us:
 - patrons found QuickSearch useful
 - patrons finding articles and using them in their papers
 - patrons were repeat users of QuickSearch
- 152 people took time to write comments, we are aggregating this qualitative data and using it to set our next priorities

More Alterations

- Users wanted to see the journal title in the results display, so we changed the default to brief view instead of table view, in fact we removed table view altogether
- Highlight citations that have fulltext locally or through SFX (move to MetaLib 4 soon)
- Others ...peer-reviewd/scholarly articles, known item search, user defined # results

V. Responses and Lessons

- Push back from departments (after the fact)
 - library cultural issues
 - best results vs. good enough results
 - concerns about disintermediation
- How are we Mitigating these Issues?
 - working together to analyze the results and then tweaking the system to perform better
 - analyzing actual user queries

Lessons

- Expect to be surprised, nothing tests your system like going live with real users
- Push harder for feedback early especially with internal users, don't just send emails, go to department meetings, promote the tools
- Get internal users on board early, involve them in the decisioning and testing process

Lessons

- Nothing speaks quite as loudly as data, our user survey satisfied many skeptics
- Adjust in increments as needed/requested, try to meet user's needs and behaviors, Metasearch is still evolving
- Begin the process again

Lessons

- Determining benefits and limitations of metasearch is key
 - great for ‘good enough’ finding
 - leads users to specific resources
 - easy starting point
 - especially useful for undergrads
 - not designed for complete, in depth research
 - relatively slow
 - limited number of resources enabled
 - simultaneous user limits continue to be a problem

VI. Future Plans

- Start over with the feedback we have gotten and go into another re-implementation process (iterative)

Thank You

