LibX - an Open Source, Community Platform for Delivering Library Services

Access 2008
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Virginia Tech
Where it all began...

• Motivation
  – Users are increasingly bypassing library when doing research
• Idea: a “library tool”
  – Put the library back in the picture!
• A “virtual librarian” that guides users to library resources while they use the Web
  – integrates access to library resources into the users’ “webflow”
  – no matter which page a user visits (⇒ needs client-side presence!)
LibX Features

• Toolbar and right-click context menu
• Adaptive and user-configurable context menus
• OpenURL support
• Magic Button (Google Scholar support)
• Web Localization via Embedded Cues
• Autolinking
• Off-campus access via EZProxy or WAM
• Support for CiteULike
• Support for COinS
• Support for xISBN
• Show/Hide Hotkey
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10/3/2008
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LibX Timeline

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Edition Builder
Motivation

• Librarians responsible for customizing LibX for their institution
  – Customized version of LibX = **LibX edition**
• Manually configuring LibX requires knowledge about:
  – Underlying LibX implementation
  – XML syntax
  – Running scripts
  – Many different OPAC settings (> 140)
• Developers of LibX manually created 150 editions
  – Demand was more than supply!
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LibX Edition Builder

• Interactive Web application that allows the creation and maintenance of LibX editions
  – Provides step-by-step instruction to librarians to customize LibX
  – Outputs ready-made, customized LibX edition
  – Hosting environment for LibX configurations and downloads
EDITION BUILDER DEMO
Demo Backup Slide
Edition Builder Internals

• Uses ZK ([www.zkoss.org](http://www.zkoss.org))
  – Server-centric Rich Internet Application (RIA) Framework
  – 100% Java servlet-based environment, minimal use of JavaScript

• Runs on server side, but look and feel is comparable to desktop applications
  – No state kept on client side
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Log Data – Adoption of Edition Builder

- 1155 total editions present by May 2008
- As of Oct 2008, 1600 total editions
  - 460 were made public
- New editions are being made public at a rate of ~20/month
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- **2008**
  - Edition Builder Study
EDITION BUILDER STUDY
LibX Edition Builder Study Facts

- Log-based usability evaluation
  - Interactions with Edition Builder logged
- User Survey
  - Contacted edition maintainers by email
  - 139 participants
  - June 20, 2008 – July 14, 2008
  - 33 questions
Key Study Goals

• Is the interface easy to learn and use?
• How successful are edition maintainers in creating LibX editions?
• Is the auto-discovery effective?
Overall Perceived Ease of Use

Overall, you would describe the LibX Edition Builder as:

- Very easy to use: 10%
- Easy to use: 50%
- Somewhat easy to use: 20%
- Somewhat difficult to use: 10%
- Difficult to use: 0%
- Very difficult to use: 0%

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In your opinion, the LibX Edition Builder interface is:

- Very easy to learn: 50%
- Easy to learn: 40%
- Somewhat easy to learn: 10%
- Somewhat difficult to learn: 0%
- Difficult to learn: 0%
- Very difficult to learn: 0%
Do you prefer this style of web application to the more traditional, page-based applications?

- I much prefer the LibX Edition Builder style: 50%
- I somewhat prefer the LibX Edition Builder style: 30%
- I do not think the style matters: 10%
- I somewhat prefer the traditional style: 20%
- I much prefer the traditional style: 0%
- No response: 0%
The LibX Edition Builder uses an interaction mode in which configuration changes are immediately saved, so you do not need to press "Save" or "Submit"

In your opinion, this mode of interaction was:
AUTODETECTION
Autodetection of OpenURL Resolver

Did the LibX Edition Builder auto-detect your OpenURL resolver?

- Yes, and the settings were correct when I imported it (30%)
- Yes, but the settings were incorrect when I imported it (5%)
- Yes, but I did not import it (10%)
- No, it was not detected (20%)
- I did not configure an OpenURL resolver for my edition (35%)
- No response (0%)

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Catalog Auto-Detection

- Auto-detection based on heuristics: Server fingerprinting, URL markers database of already configured resources
- Direct scraping of HTML forms
- OpenSearch descriptions (where advertised)

Auto Detection: enter the host name of the machine that runs your library catalog, or enter a URL to a page that contains a search form. For instance, try addison.vt.edu, worldcat.org, www.citeulike.org, pubmed.gov, hubmed.org, or complete URLs such as http://en.wikipedia.org/wiki/Main_Page.

Enter URL: 

- Found catalog 'Addison' in database (from edition 'Virginia Tech Edition'/vt)
- Found III Millennium catalog 'Addison: Search' at http://addison.vt.edu
- Found Bookmarklet catalog 'search.serialssolutions.com with Search' at http://addison.vt.edu
- Found OpenSearchDescription 'Keyword Search Addison' (Click to test)
- Found OpenSearchDescription 'Author Search Addison' (Click to test)
- Found OpenSearchDescription 'Title Search Addison' (Click to test)
- Found OpenSearchDescription 'Journal Title Search Addison' (Click to test)
Did the LibX Edition Builder auto-detect your catalog?

- Yes, it did and I was able to import the catalog immediately and the settings of the catalog worked: 35%
- Yes, it did, but the settings needed slight adjustment: 20%
- Yes, it did, but the settings needed significant adjustment: 15%
- Yes, it did, but I did not know what option I should use to add the catalog to my edition: 10%
- It said that OCLC reported a catalog, but the LibX Edition Builder said "0 resources found": 5%
- I did not notice any such information when I used the LibX Edition Builder: 5%
- No response: 5%
How would you rate the usefulness of the auto-detection box in the Catalogs & Databases tab?

- It was highly successful in detecting the resources I wanted to add to my edition
- It was generally successful in detecting the resources I wanted to add to my edition
- It was somewhat successful in detecting the resources I wanted to add to my edition
- It rarely detected the resources I wanted to add to my edition
- It never (or almost never) successfully detected the resources I wanted to add to my edition
- I did not understand what I needed to enter into this search box
- I did not use the auto-detection search box
Log Data Results

Distribution of OPACS detected by Auto Detection

- Voyager
- III Millennium
- Endeca
- Horizon iPac
- Sirsi
- Aleph

Total Usage 1082

Log Data Results (cont’d)

• 50% editions built in 72 minutes or less
• 80% editions built in 190 minutes or less
Study Findings

• The LibX Edition Builder
  – is easy to use and learn
  – auto-detection is effective at configuring resources

• Created a community

• Open source spirit
  – Anybody can create, share, publish, copy and adapt editions
Motivation

• Libraries are creating new, digital services and content

• Technology
  – Service-oriented architectures, web services interfaces
  – Support mashups; provide HTML widgets

• Librarians, educators, and users create
  – Online tutorials, subject guides, visualizations
  – Social OPACs: tagging, reviews, recommender services

• How can we provide those services at the point of need?
LIBX 1.5 DEMOS
Demonstrations

• Enhanced COinS service
  – Link 360 XML interface

• Catalog searches from Google

• Holdings + availability in Amazon

• OCLC Identities
Demo 1: Enhanced COinS Handling

- **On-line estimation of hidden Markov model parameters based on the Kullback-Leibler information measure**
  
  
  by V Krishnamurthy, JB Moore
  
  posted to [p-fb hmm] by [iford] on 2008-10-02 02:10:31 as ★★ along with 3 people and 2 groups

  \[ \text{LibX Standard COinS Processing} \]

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  \[ \text{LibX + Link/360 Integration} \]
Demo 2: Addison in Google


Firefox Hacks | O'Reilly Media
Firefox Hacks is ideal for power users who want to maximize the effectiveness of Firefox, the next-generation web browser that is quickly gaining in ...

speed up firefox - Hack a Day
Now if I could just find a hack for Firefox that would cause it to use the readline/Emacs key combinations in the edit URL box like Mozilla does. ...

The Firefox Hacks You Must Have
With a new version of the open-source browser out, we offer our guide to the nifty, fun Firefox extensions that will change your life. By Quinn Norton.

Firefox Hacks: Tips & Tools for Next ...
by Nigel McFarlane - 2005 - 404 pages
books.google.ca - About this book - More book results »
Demo 3: Addison in Amazon

1776 (Hardcover)
by David McCullough (Author) "On the afternoon of Thursday, October 26, 1775, His Royal Majesty George III, King of England, rode in royal splendor from St. James's Palace to..." (more)
Key Phrases: glorious cause, New York, Nathanael Greene, New Jersey (more...)

LibX found 2 holdings ( 1 available )
Newman 2nd Floor / E208 .M396 2005 / not available
Newman 2nd Floor / E208 .M396 2005 / Available
List Price: $32.00
Price: $21.12 & eligible for FREE Super Saver Shipping on orders over $25. Details
You Save: $10.88 (34%)
Special Offers Available

In Stock.
Ships from and sold by Amazon.com. Gift-wrap available.

Want it delivered Friday, October 3? Order it in the next 20 hours and 15 minutes, and choose One-Day Shipping at checkout. See details
Smith, Liz 1923-

**Overview**
- **Works:** 20 works in 27 publications in 1 language and 5,713 library holdings
- **Subject Headings:** Gossip columnists--United States
- **Roles:** Reporter, Interviewer, Host, Speaker
- **Classifications:** pn4874.s563, 070.92

**Publication Timeline**

<table>
<thead>
<tr>
<th>Year</th>
<th>Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
</tbody>
</table>

**Key**
- Publications about Liz Smith
- Publications by Liz Smith

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**Alternative Names**
- Smith, Mary Elizabeth 1923-

**Languages**
- English (35)
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• 2008
  – Edition Builder Study
  – NLG grant for LibX 2.0 community platform
LibX 2.0 plugin: executes Libapps, merging library information into pages.

Users: decide to which library services to subscribe, see expanded view of the web

Librarians: create or adapt Libapps from reusable, shareable components

World Wide Web

Library Resources and Web Services
Edition Builder Survey: Programming Skills

How would you rate your programming skills and familiarity with computers and the web?

- I have intermediate or expert-level programming skills in multiple programming languages: 40%
- I have beginner-level programming skills in at least one programming language: 40%
- I do not program, but I frequently use web-based applications such as content management systems or blogs/wikis: 30%
- I do not program, and I also don't have much familiarity with web-based applications, but I use my computer extensively: 10%
- I only use a web browser for looking up information on the web or in the library catalog: 0%
- I use computer applications only if I absolutely have to: 0%
- No response: 10%
LibApp Example

OCLC xISBN

yazproxy Z39.50 Gateway

ILS-DL/libxess

xISBN Service

Presearch Service

ILS snapshot

ISBN Scraper

Tuple Space

(isbn: 006073132X, location: )

Tooltip Display

Modules

LibApp
LibX 2.0 - Target Audiences

**LibX 2.0 Developers** – make services available and write modules and libapps

**LibX 2.0 Adapters** – adapt, combine, reuse, and share services

**LibX 2.0 User Community** - subscribes to services they like
LibX 2.0 Developers

• Write “modules” – small pieces of code that
  – Scrape a page
  – Interact with services
  – Process and combine results

• Modules have access to all LibX configuration information via API

• Can use JavaScript libraries (e.g., jQuery)

• Browser-independent platform: Firefox and IE

• Fully decentralized infrastructure
LibX 2.0 Adapters

• Web-savvy librarians
  – *Not programmers*

• Edition Builder will become a repository to manage LibX modules and libapps
  – Adapters can add, combine, share, adapt, customize libapps

• Create localized services for their users

• Provide feedback to developers
LibX 2.0 Users

• Subscribe to services recommended by their edition maintainers using local settings
  – Stay connected to their libraries
• Decide which services they like
  – Fine-grained control and preferences
• Marketing
  – Will help adapters by providing marketing kit
  – Users must see benefits
LibX Team

• Annette Bailey
• Godmar Back
• Kyrille Goldbeck
• Arif Khokar
• Mike Doyle
• Alumni
  – Nathan Baker
  – Tilottama Gaat
  – Tobias Wieschnowsky