

# LibX – Putting Millennium and WebBridge in Firefox

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May 21, 2006

# LibX - Overview

- LibX is a localized Firefox extension that integrates access to library resources into the browser
- Motivation – why do we need it?
- Background – why did we build it?
- Demonstration – what does it do?
- Editions – how to get one for your library?

# The Age of Google

- Study by Fast & Campbell 2004
  - *I still like Google: university student perceptions of searching OPACs and the web*
- Tampa Tribune article July 11, 2005
  - Professors frustrated with students relying solely on Google for research
  - Students respond that using the library is “work”

# What Users May Not Know About Google

- Google does not vet sources
- Google's page ranking algorithm does not reflect relevance
- Google lacks metadata
- Google does not provide access to all possible sources (e.g., print holdings)
- Google does not know about local resources

# What Users Like About Google

- Google is easy to use and convenient
  - Handles queries robustly
- Google is a one stop information resource
  - Web, Print, News, Scholar
- Google is fast and available 24/7
  - Search is integrated in most browsers

# Our Challenge

- Can librarians provide patrons with resources that are
  - Relevant
  - Authoritative
  - Complete
  - Accessible
- while providing the ease of use, integration, and availability of modern search engines?

# LibX History

- Idea developed in summer of 2005
- Researched existing library toolbars & extensions, scripts, bookmarklets,...
- Found a number of toolbars
  - FASTJack, HALbar, etc.
- Web localization services
  - Library Lookup project (Bookmarklets, Greasemonkey scripts)
  - WAG The Dog project

However...

# LibX History (cont'd)

- Existing toolbars were not adaptable (or adoptable!) for use by other libraries
  - Or it wasn't easy to do so
- Existing toolbars were limited in functionality
- We wanted an easily adaptable infrastructure on which to deliver a wide variety of services



# LibX

- Provides shortcut to library resources
- Uses Firefox browser extension technology
  - Integrated into the browser's user interface
  - Installed on the client-side



# What LibX Provides

- Direct Access to OPAC(s)
  - Integrated toolbar
  - Smart context menu
- Direct access to OpenURL resolver to find appropriate copy
  - Directly via toolbar or indirectly through Google Scholar
- Localization
  - Research companion that “hints” at library resources
  - Support for COinS

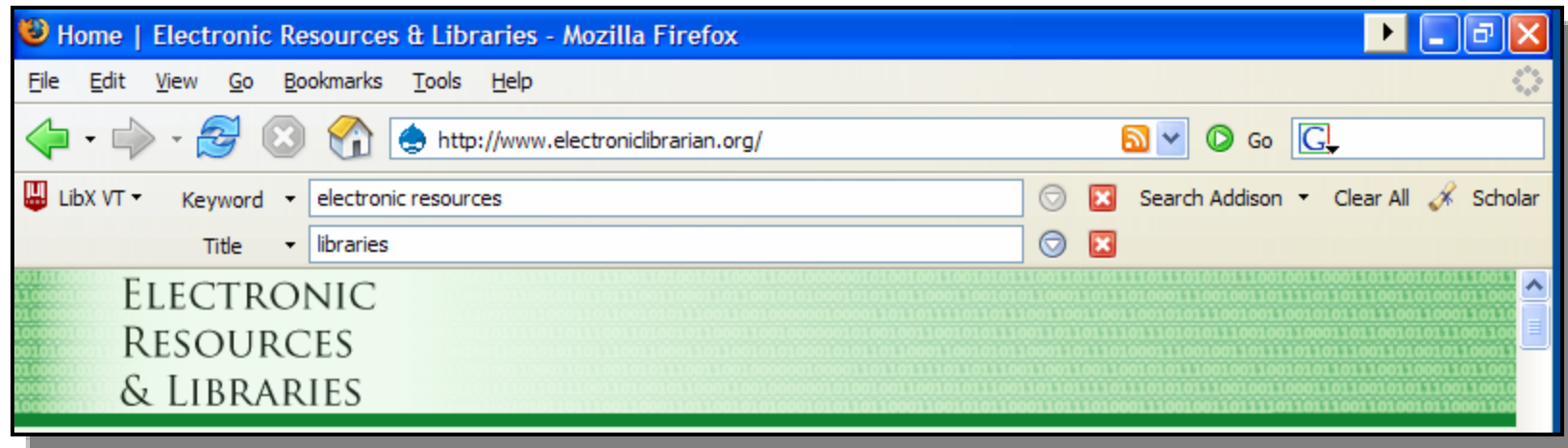
# OPAC Access

- Toolbar User Interface
  - Supports single & multi-term searches
  - Not intended to replace “advanced search page” – captures common search pattern
  - User can set display preferences
- Right-click context menu
  - Adapts to selections
- Support of different OPACs
  - Millennium, Dynix/Horizon, Voyager, Aleph
  - Configurable to support multiple OPACs simultaneously

# Demonstration 1

Toolbar, Context Menus

# OPAC Toolbar



- Expands automatically for multi-term searches
- Offers commonly used search types:
  - Keyword, author, title, isbn, call number

Virginia Tech Libraries /All Locations - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://addison.vt.edu/search/X?SEARCH=(electronic%20resources)+and+t: Go


LibX VT Keyword electronic resources Title libraries Search Addison Clear All Scholar

Home | Electronic Resources & Libraries Virginia Tech Libraries /All Locations


Result Page 1 2 Next

Save Marked Records Save All On Page


**KEYWORDS (1-12 of 17)**

1 ☐ Save  **Digital libraries / William Y. Arms.** 2000

Call number	Status	Format
Z692.C65 A76 2000	<a href="#">Check Availability</a>	BOOK

2 ☐ Save  **Libraries, the Internet, and scholarship : tools and trends converging / edited by Charles F. Thomas** 2002

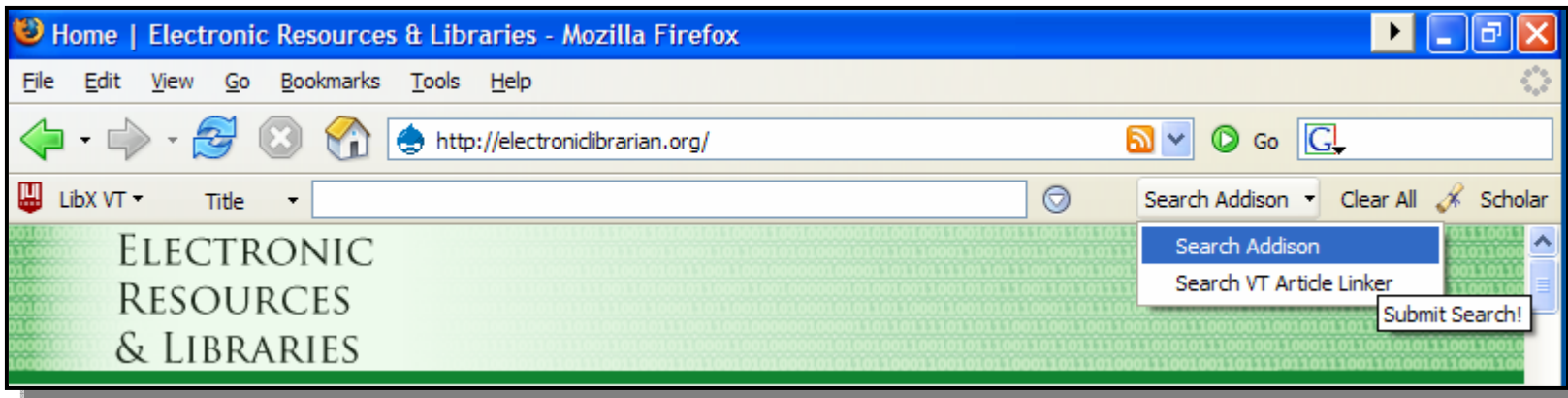
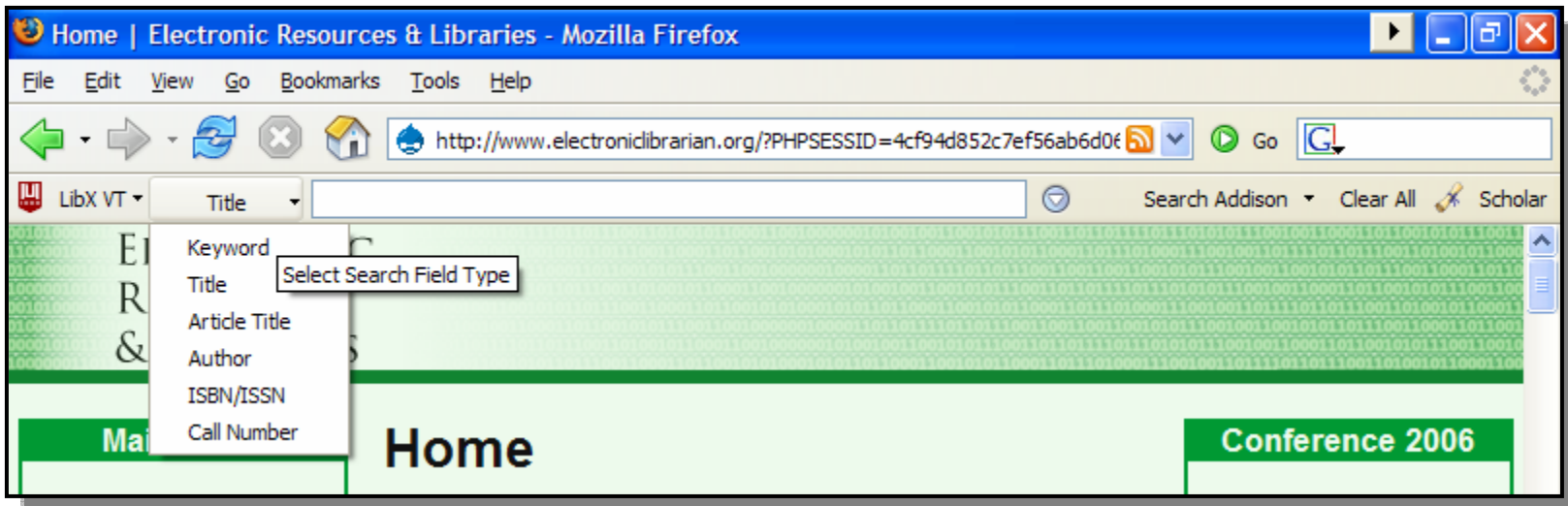
Call number	Status	Format
Z692.C65 L535 2002	<a href="#">Check Availability</a>	BOOK

3 ☐ Save  **Perceptions of libraries and information resources : a report to the OCLC membership / [principal co** 2005

Call number	Status	Format
Z721 .P47 2005	<a href="#">Check Availability</a>	BOOK

Done

# OPAC Toolbar (2)



# Context Menu



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File Edit View Go Bookmarks Tools Help

http://addison.vt.edu/search/?searchtype=t&searcharg=American%20Gods Go

LibX VT Keyword Search Addison Clear All Scholar


NG Neil Gaiman - American Gods Virginia Tech Libraries /All Locations

Author [Gaiman, Neil.](#)

Title **American gods : a novel / Neil Gaiman.**

Publication info. New York : W. Morrow, c2001.

Call no. PS3557.A3519 A84 2001



Location	Call No.	Status
<a href="#">Newman 3rd Floor</a>	<a href="#">PS3557.A3519 A84 2001</a>	DUE 04-11-06

Edition 1st ed.

Description 465 p. ; 25 cm.

Subject [National characteristics, American -- Fiction.](#)  
[Spiritual warfare -- Fiction.](#)  
[Ex-convicts -- Fiction.](#)  
[Bodyguards -- Fiction.](#)  
[Widowers -- Fiction.](#)

ISBN 0380973650 (alk. paper)

Result page: [Previous Page](#) [Next Page](#)

Done

# Nested Context Menu

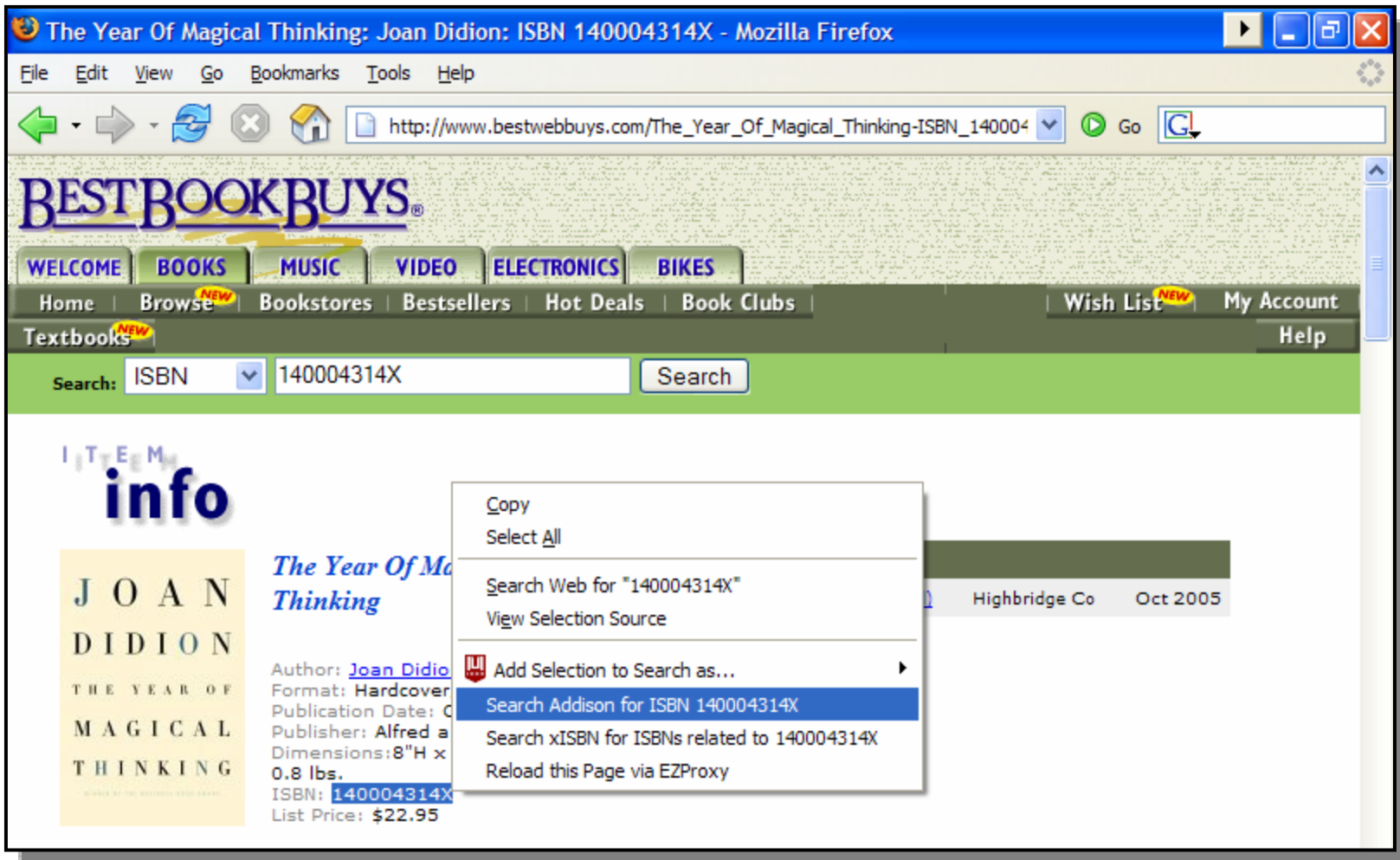


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# Adaptive Context Menu



Virginia Tech Libraries /All Locations - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://addison.vt.edu/search/?searchtype=i&searcharg=140004314X&startl

Start Over Request Save Records MARC Display Another Search

(Search History)

ISBN/ISSN 140004314X All University Libraries System Sorted

Search

☐ Limit search to available items

Result page: Previous Page Next Page

Author [Didion, Joan.](#)

Title **The year of magical thinking / Joan Didion.**

Publication info. New York : Knopf, 2005.

Call no. PS3554.I33 Z63 2005

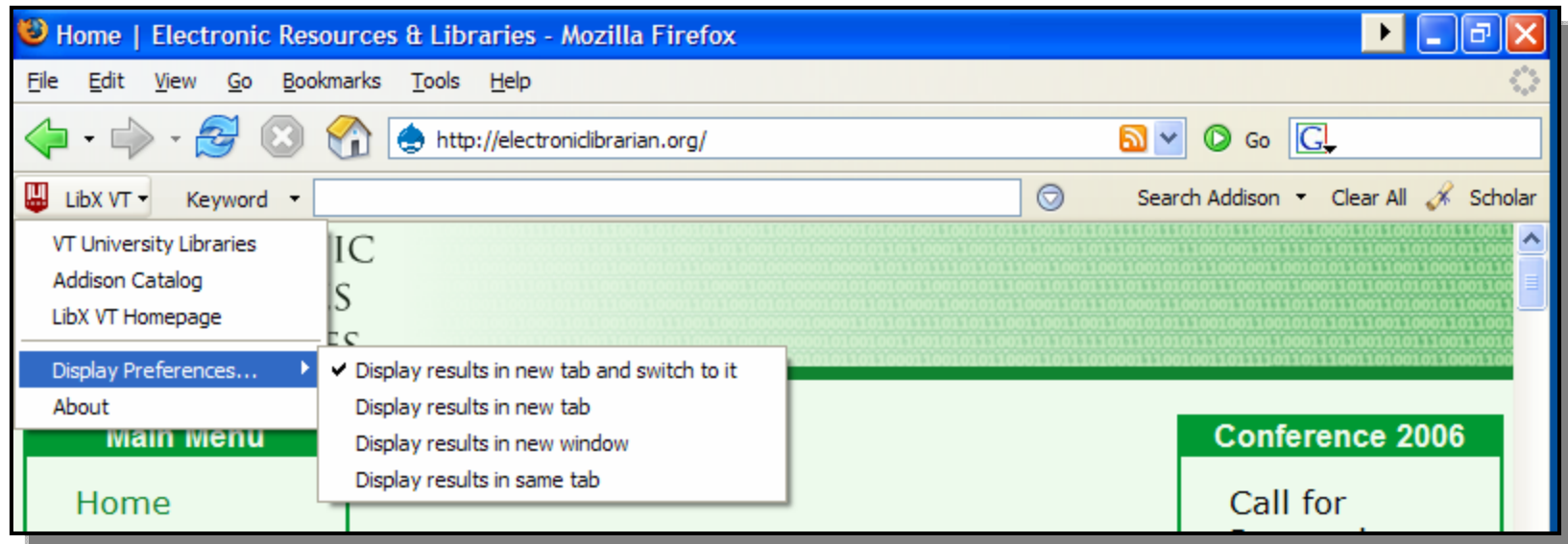
Location	Call No.	Status
<a href="#">Newman 3rd Floor</a>	<a href="#">PS3554.I33 Z63 2005</a>	DUE 05-17-06

Edition 1st ed.

Description 227 p. ; 21 cm.

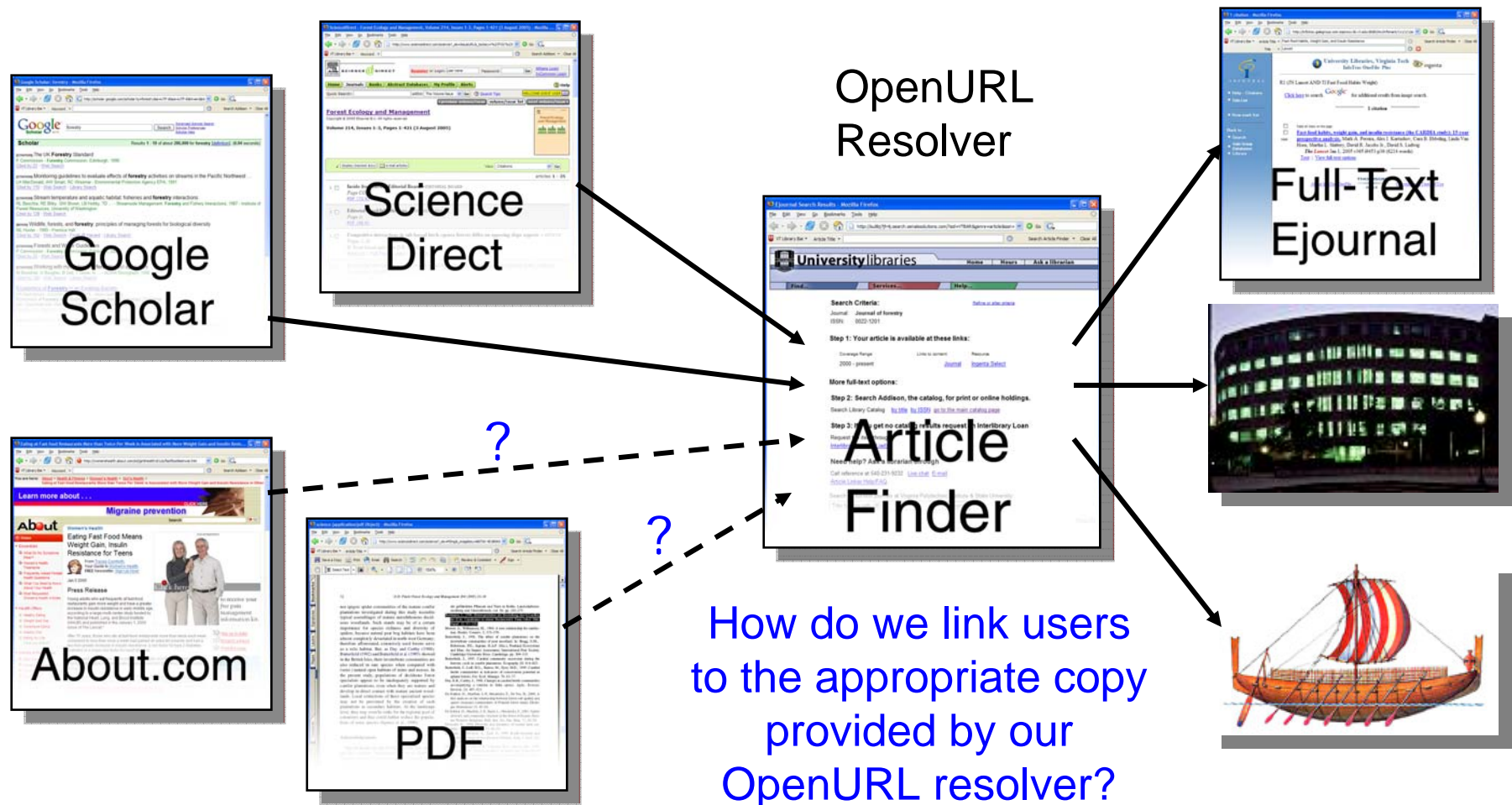
Done

# Display Preferences & Links



- Users can set preferences on how results should be displayed
- Libraries can configure links that are being displayed to users

# OpenURL & Appropriate Copy



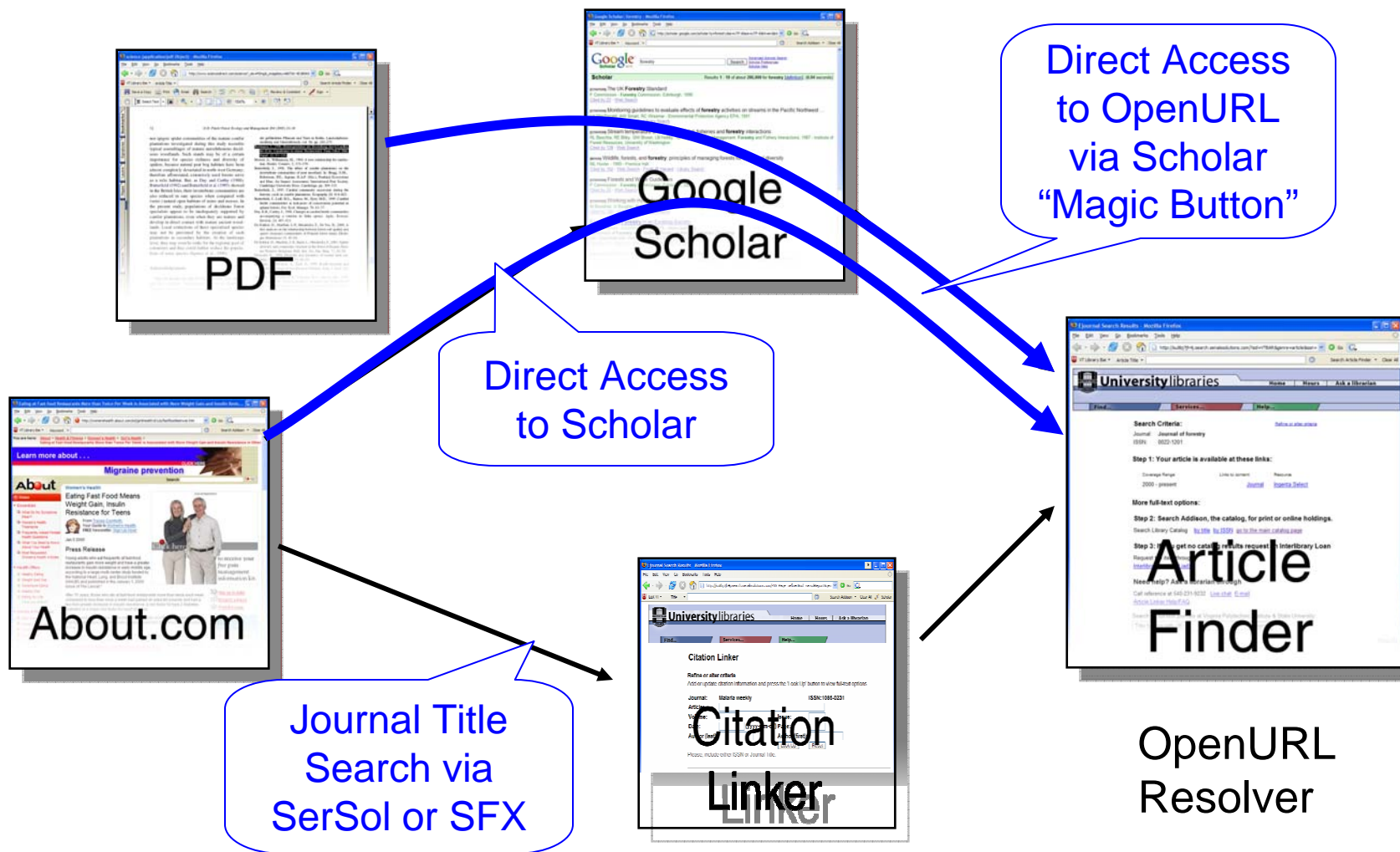
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# OpenURL Access Options in LibX



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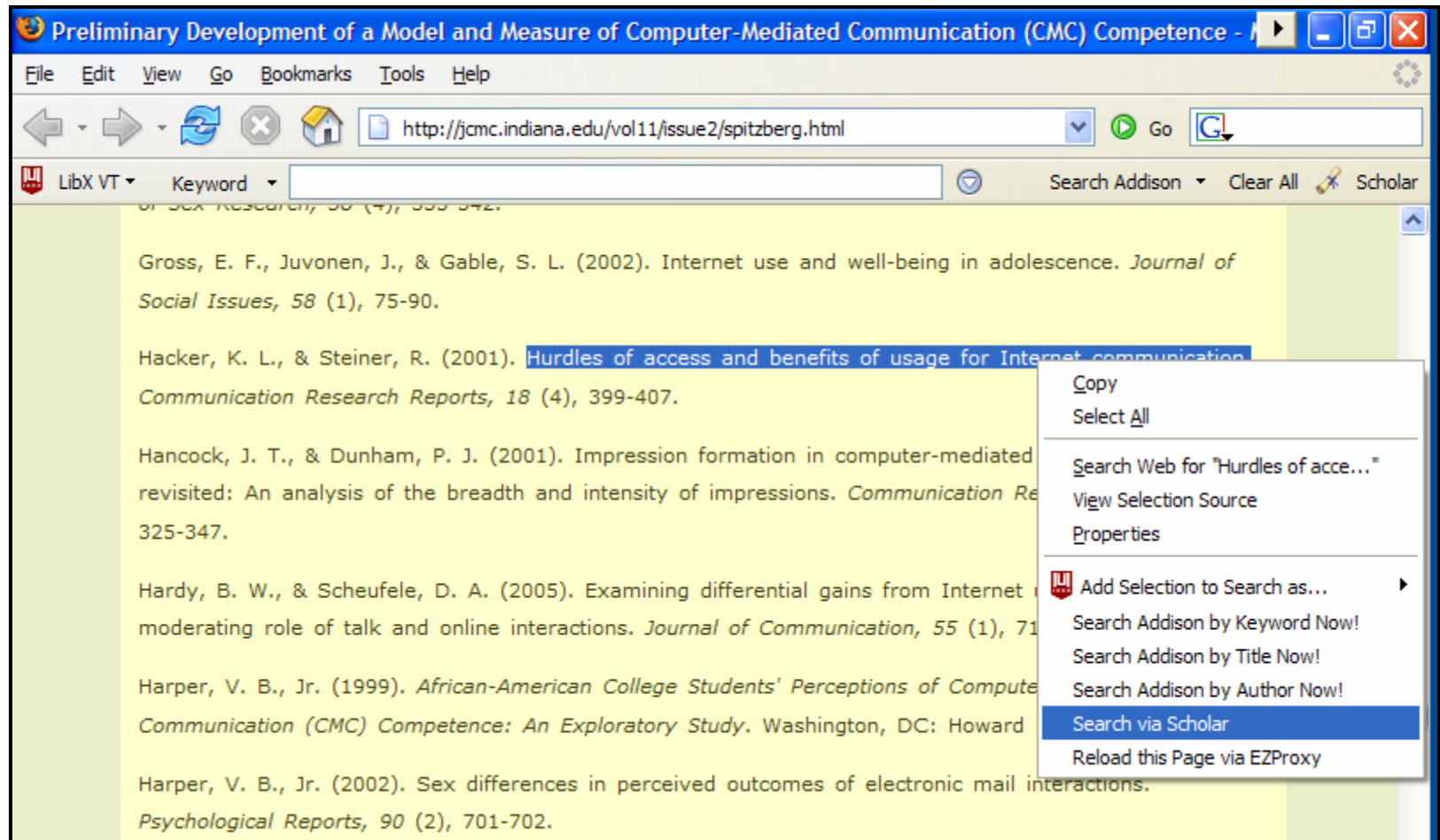
23

# Demonstration 2

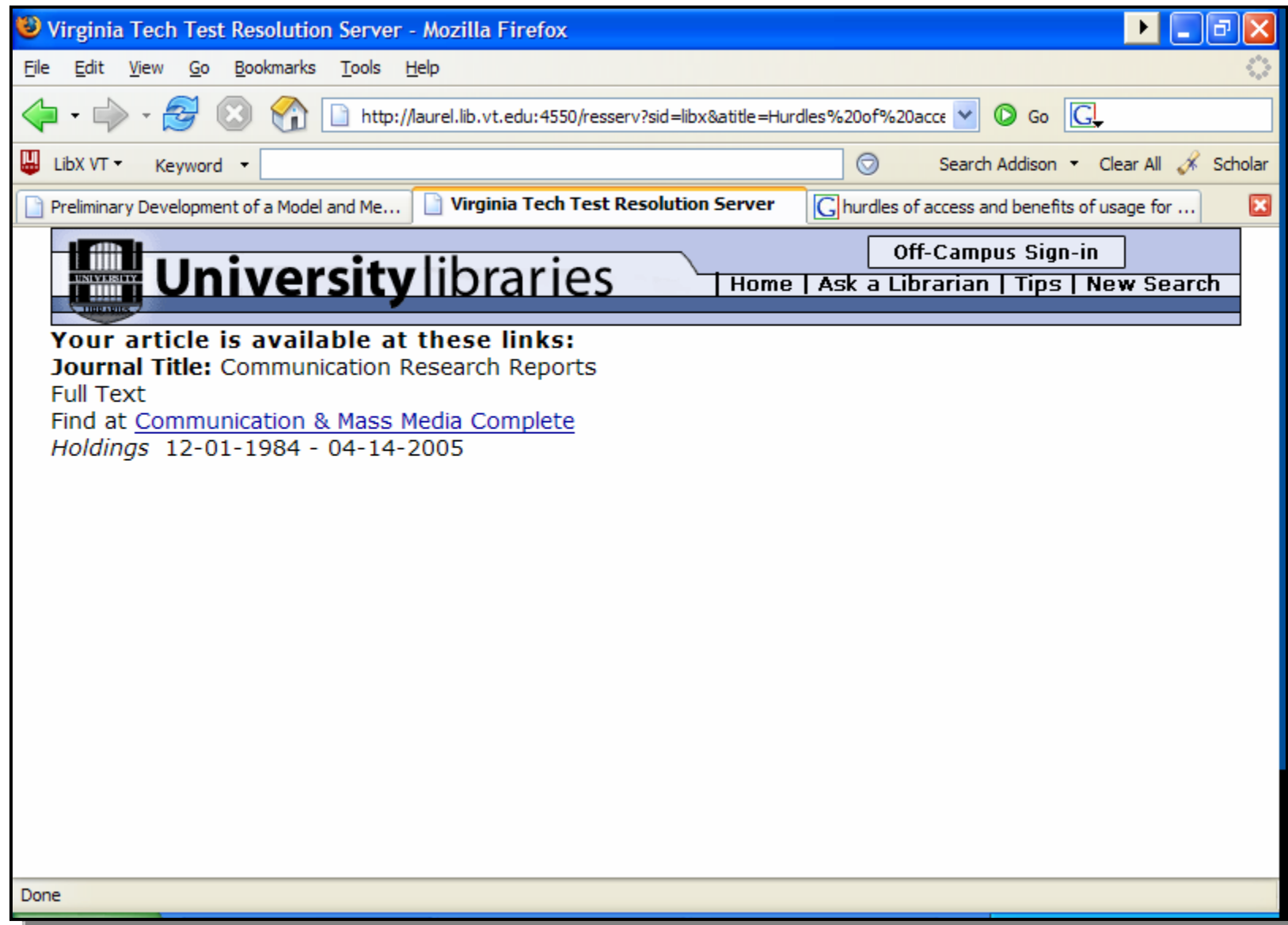
## OpenURL Access & The “Magic Button”



# OpenURL Access via Scholar



Source: <http://jcmc.indiana.edu/vol11/issue2/spitzberg.html>



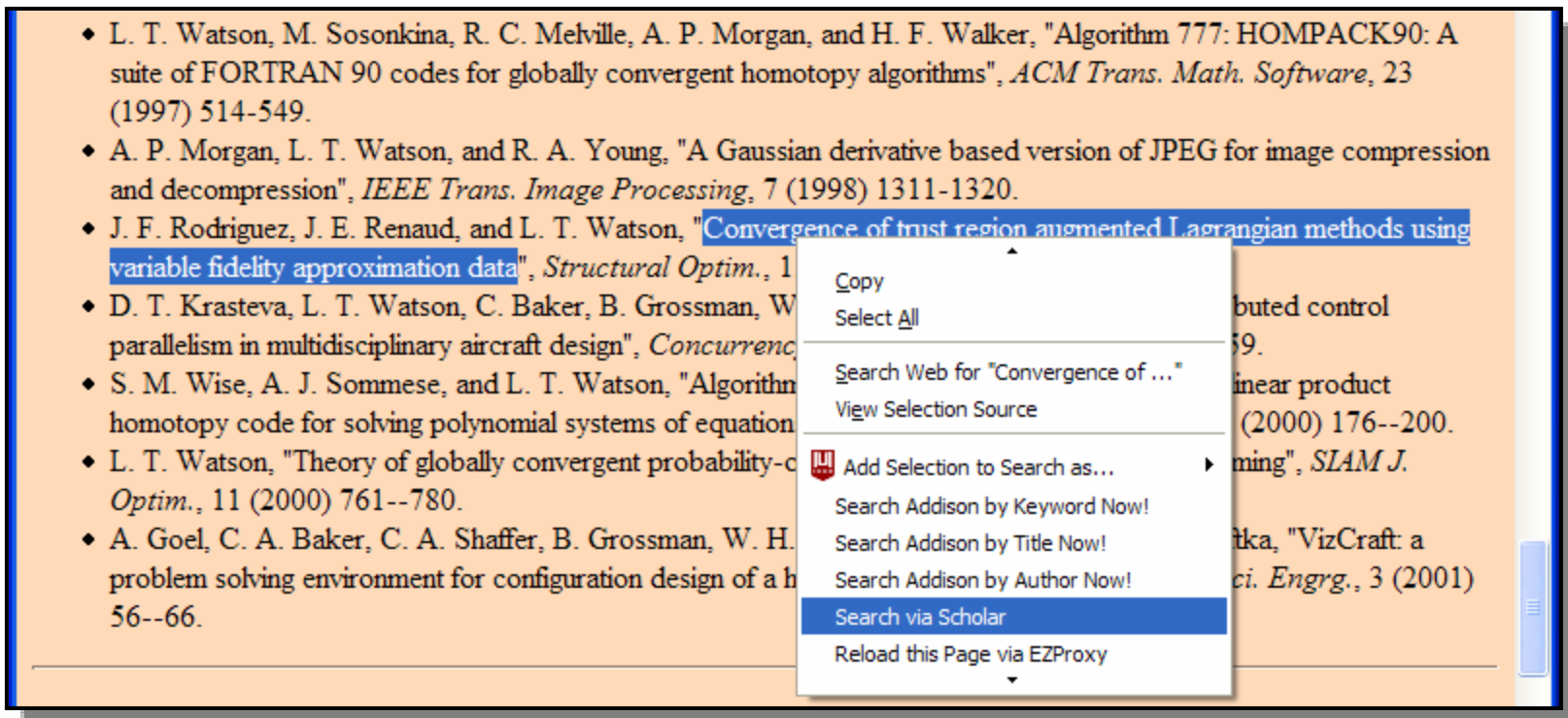
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# OpenURL Access via Scholar (2)

OpenURL can lead user to print resources if no electronic copy is available



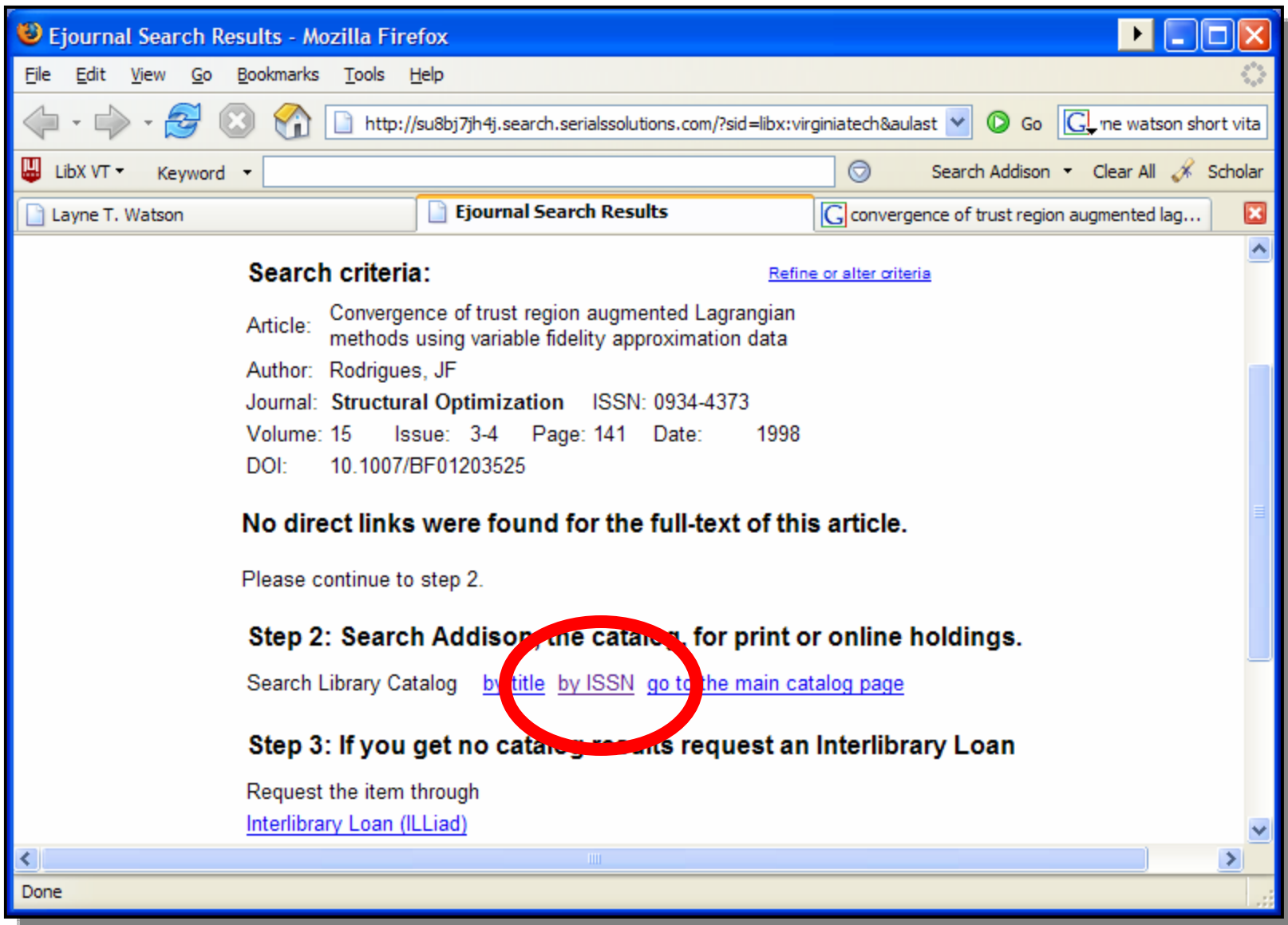
The screenshot shows a web browser window displaying a list of references. A context menu is open over the third reference, which is highlighted in blue. The menu options are:

- Copy
- Select All
- Search Web for "Convergence of ..."
- View Selection Source
- Add Selection to Search as...
- Search Addison by Keyword Now!
- Search Addison by Title Now!
- Search Addison by Author Now!
- Search via Scholar
- Reload this Page via EZProxy

The references listed are:

- ♦ L. T. Watson, M. Sosonkina, R. C. Melville, A. P. Morgan, and H. F. Walker, "Algorithm 777: HOMPAC90: A suite of FORTRAN 90 codes for globally convergent homotopy algorithms", *ACM Trans. Math. Software*, 23 (1997) 514-549.
- ♦ A. P. Morgan, L. T. Watson, and R. A. Young, "A Gaussian derivative based version of JPEG for image compression and decompression", *IEEE Trans. Image Processing*, 7 (1998) 1311-1320.
- ♦ J. F. Rodriguez, J. E. Renaud, and L. T. Watson, "Convergence of trust region augmented Lagrangian methods using variable fidelity approximation data", *Structural Optim.*, 1
- ♦ D. T. Krasteva, L. T. Watson, C. Baker, B. Grossman, W. H. Shaffer, "Parallelism in multidisciplinary aircraft design", *Concurrent Engineering*, 10 (2000) 176--200.
- ♦ S. M. Wise, A. J. Sommese, and L. T. Watson, "Algorithm 777: HOMPAC90: A suite of FORTRAN 90 codes for globally convergent homotopy algorithms", *ACM Trans. Math. Software*, 23 (1997) 514-549.
- ♦ L. T. Watson, "Theory of globally convergent probability-constrained optimization", *Optim.*, 11 (2000) 761--780.
- ♦ A. Goel, C. A. Baker, C. A. Shaffer, B. Grossman, W. H. Shaffer, "A problem solving environment for configuration design of a vehicle", *AI Mag.*, 22 (2001) 56--66.

Source: <http://people.cs.vt.edu/~ltw/shortvita.html>



Virginia Tech Libraries /All Locations - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://addison.vt.edu/search/i?SEARCH=0934-4373

LibX VT Keyword Search Addison Clear All Scholar

**Title** **Structural optimization.**

**Publication info.** Berlin : Springer-Verlag, 1989-

**Call no.** TA658 .S65

<b>Call No.</b>	TA658 .S65
<b>Location</b>	Newman Library
<b>Holdings</b>	v. 1-18 1989-Dec. 1999 STACKS

Location	Call No.	Status
<a href="#">Newman 5th Floor</a>	<a href="#">TA658 .S65</a> V. 17	AVAILABLE
<a href="#">Newman 5th Floor</a>	<a href="#">TA658 .S65</a> V. 18	AVAILABLE

**Description** 18 v. : ill. ; 28 cm.

**Frequency** Quarterly


**Publication date** Vol. 1, no. 1-  
Ceased with issue for Vol. 18, no. 4, in Dec. 1999.

**Note** Title from cover.

**Indexed in:** Computer & control abstracts 0036-8113 Mar. 1990-  
Electrical & electronics abstracts 0036-8105 Mar. 1990-  
Physics abstracts 0036-8091 Mar. 1990-

Done

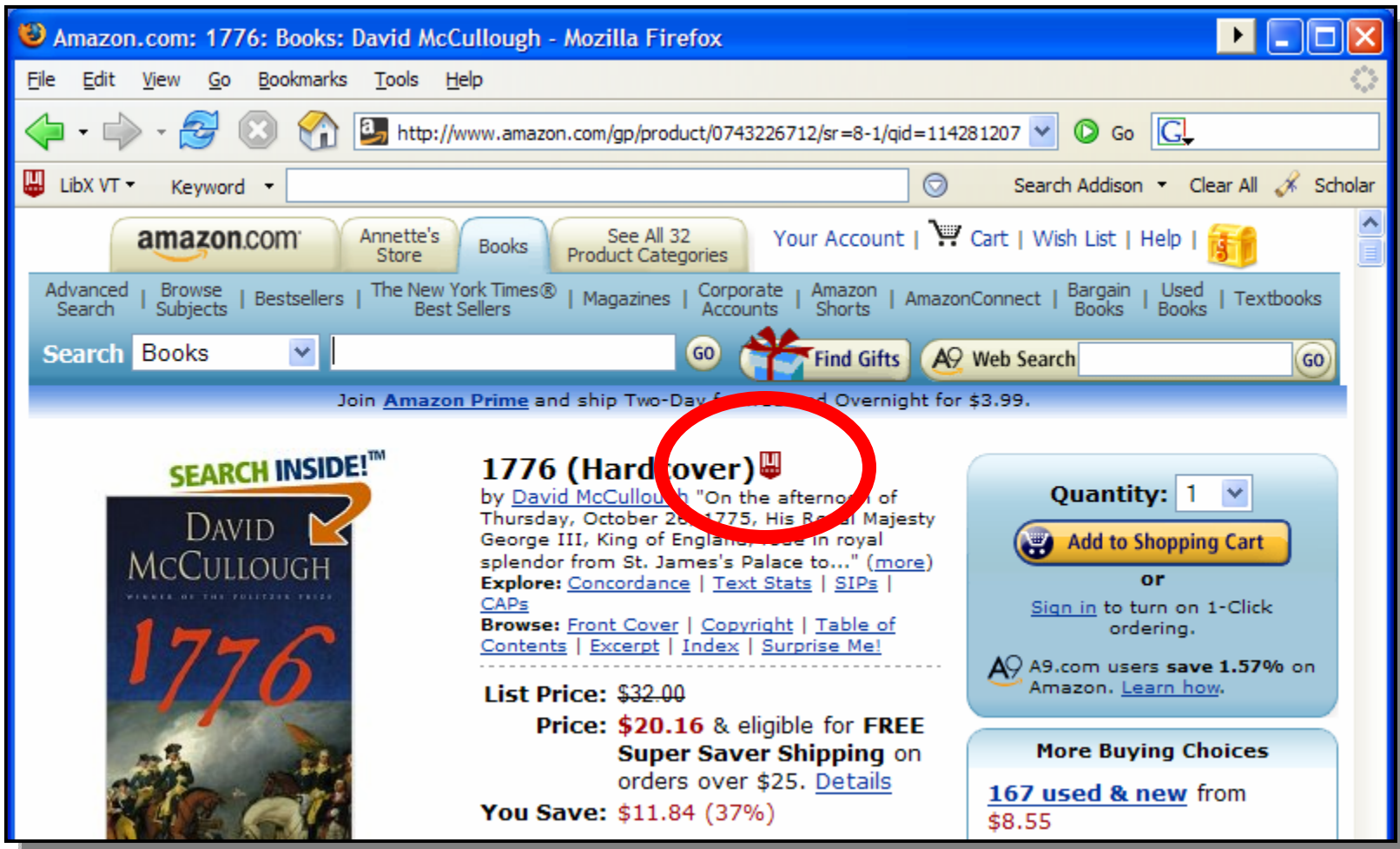
# Localization via LibX

- LibX enriches web pages before they are displayed to the user
- Inserts hyperlinked “cues”  that point at local library resources
  - E.g., amazon.com page points at library record of same book
- Implemented for: google.com, yahoo.com, bn.com, NY Times, Books in Print, ...
- Includes support for COinS (ocoins.info)

# Demonstration 3

## Localization using Cues

# Cues on Amazon





Virginia Tech Libraries / All Locations - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://addison.vt.edu/search/?searchtype=i&searcharg=0743226712&sta

LibX VT Keyword Search Addison Clear All Scholar

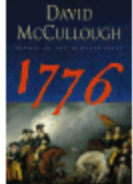
ISBN/ISSN 0743226712 All University Libraries System Sorted

Search

☐ Limit search to available items

Result page: Previous Page Next Page

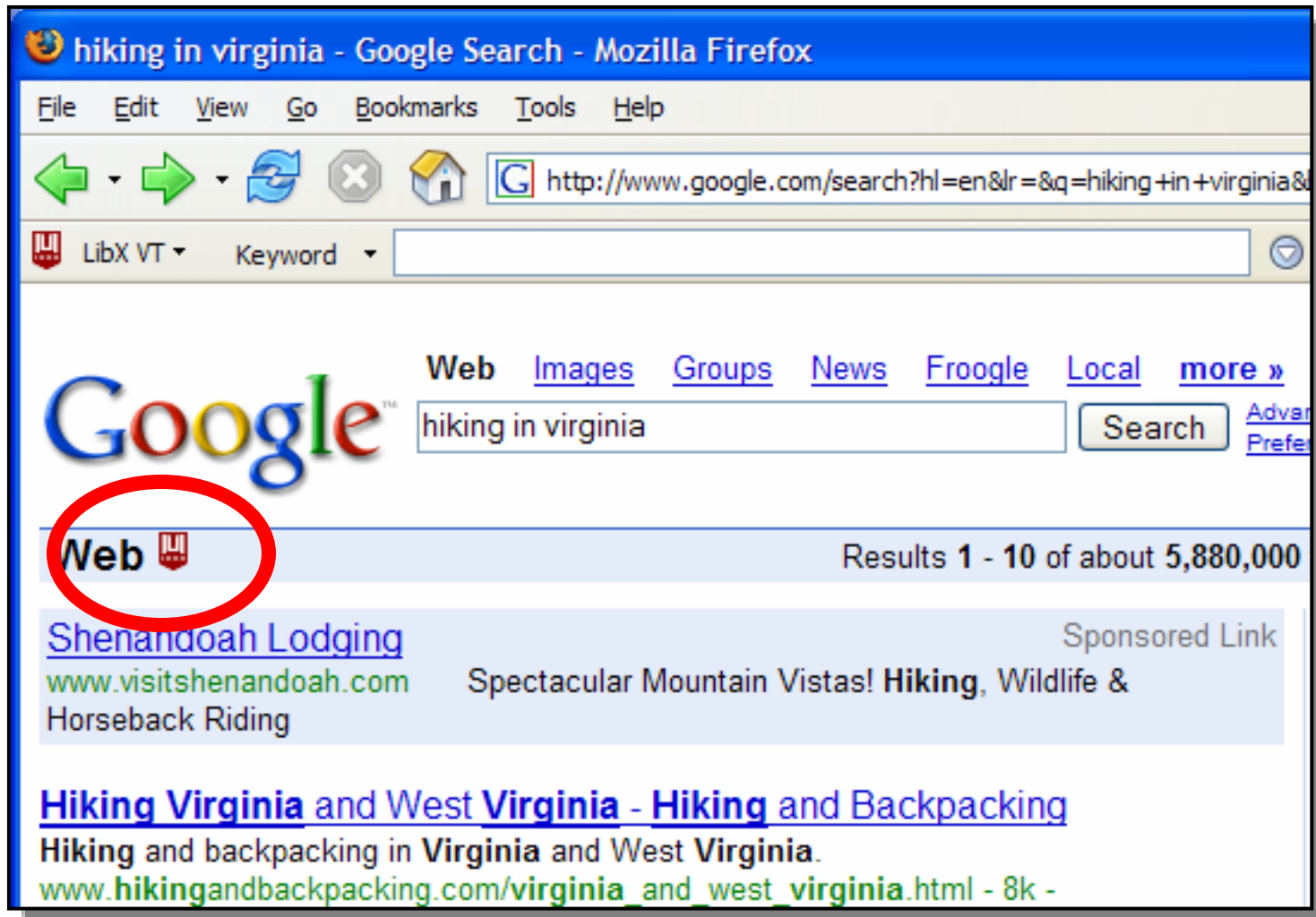
Author	<a href="#">McCullough, David G.</a>
Title	<b>1776 / David McCullough.</b>
Publication info.	New York : Simon & Schuster, c2005.
Call no.	E208 .M396 2005



Location	Call No.	Status
<a href="#">Newman 2nd Floor</a>	<a href="#">E208 .M396 2005</a>	DUE 10-19-05BILLED
<a href="#">Newman Popular Reading</a>	<a href="#">Browse E524</a>	DUE 04-05-06 +1 HOLD
<a href="#">Newman 2nd Floor</a>	<a href="#">E208 .M396 2005</a> c.2	DUE 04-14-06

Done

# Google



Virginia Tech Libraries /All Locations - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://addison.vt.edu/search/Y?SEARCH=hiking%20in%20virginia&startLir Go

LibX VT Keyword Search Addison Clear All Scholar

KEYWORD hiking in virginia All University Libraries Search


☐ Limit search to available items

Tried: (hiking and in and virginia)  
15 results found. Sorted by Relevance


Result Page 1 2 Next

Save Marked Records Save All On Page

**KEYWORDS (1-12 of 15)**

1 ☐ Save  **A cross-scalar validation study of the motivations of backcountry hikers in Shenandoah National Park** 1980

Call number	Status	Format
LD5655.V855 1980.D398	<a href="#">Check Availability</a>	BOOK

2 ☐ Save  **The trails of Virginia : hiking the Old Dominion / Allen de Hart.** 2003

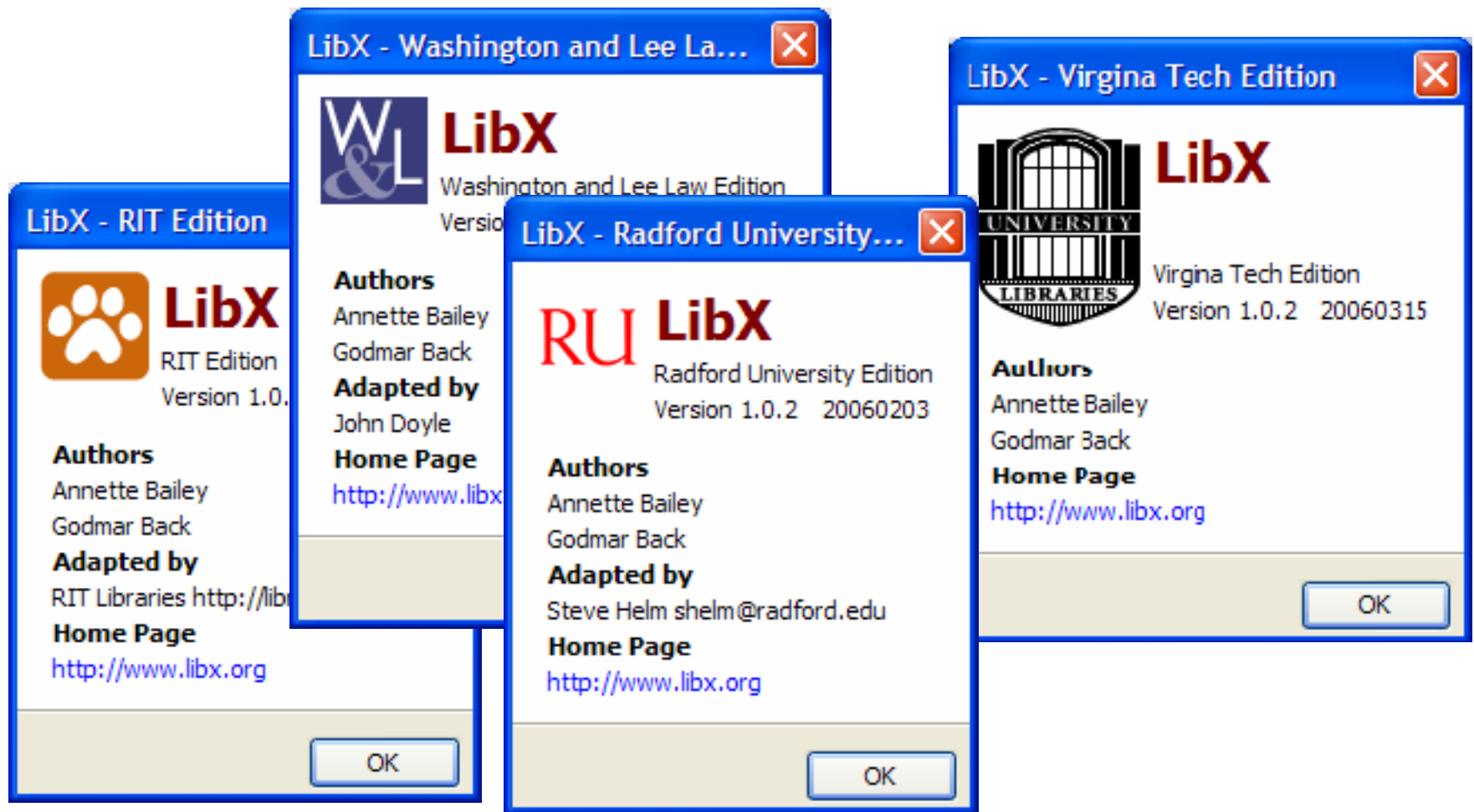
Call number	Status	Format
GV199.42.V8 D4 2003	<a href="#">Check Availability</a>	BOOK

Done

# Try LibX!

- LibX is available for your library!
- It's nifty
- It's free
- It's Open Source
- Go to <http://libx.org> for more information

# Currently Deployed Editions



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# Future Work

- Edition builder interface
  - Currently building an extension requires creating a config file which must be uploaded and checked
  - Goal: develop a wizard-type web interface where libraries can build a LibX edition interactively
- Create a LibX plug-in for Internet Explorer

# Questions?

- Thank you from the LibX Team

Annette Bailey

Godmar Back

Kiri Goldbeck

[libx.org@gmail.com](mailto:libx.org@gmail.com)

# Additional Material



# LibX & Privacy

- Key goal: protecting LibX users' privacy
- Users do not reveal more information than they would if they used the library catalog
  - Exception: Referrer URL
- Tenet: Do not run queries unless user explicitly clicks on a link
  - E.g., no automatic holdings checking if user visits amazon
- Trade-off Privacy/Convenience

# LibX & Security

- Firefox extensions are trusted
- Users must trust that extension is not malicious
- LibX does not support user-provided scripts
  - More secure than Greasemonkey
- Source code is available for anybody to inspect
- Future: sign extensions