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Title

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Permalink

<https://escholarship.org/uc/item/5n92j0h5>

Journal

Library Hi Tech News, 24(8)

ISSN

0741-9058

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Publication Date

2007-10-30

DOI

10.1108/07419050710836027

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Library Toolbars for Use and Development

Mitchell Brown

Libraries have long offered search options for users, most based on an online catalog or hierarchical static webpages. As internet browser development evolved from Mosaic (1992) to Netscape (1994) to the present Internet Explorer (IE), Firefox, Opera and a variety of other interfaces, new options for enhancing search have emerged. Technological advances in the interoperability of web servers, online databases, and desktop publishing now offer the opportunity for users to configure personalized web interfaces that can target specific online resources for search and retrieval. Now library users can search library catalogs, full-text articles, news sources, video updates, get stock updates, and contact a librarian directly – all from a browser toolbar without opening a separate browser windows. These services add power and convenience to the user's searches.

Remote access to library services have been available for many years, first with direct dial modem banks, followed by authenticated virtual private network (VPN) connections, and now the promise of OpenID with authentication through Shibboleth. But the commercial world has moved faster than libraries to develop Google, Yahoo, YouTube, MySpace, and Facebook, where their interfaces allow users greater interaction with content and amongst users than traditional library websites. Library web pages increasingly are not the first place people search for information even though libraries spend significant amounts on databases, journal subscriptions, and media collections that are unique in the world. In his blog entries OCLC vice president and chief strategist Lorcan Dempsey has described the library world ability to attract online searches as “a weak gravitational pull” compared with popular web services (<http://orweblog.oclc.org/archives/000615.html>).

Yet, innovative use of browser toolbars could change this landscape. Internet users are becoming frustrated by pop-up windows and search options that target unknown sources. Now technology offers the option to customize search services and link users directly to library resources such a federated searching and online “Ask A Librarian” chat. Commercial services have introduced toolbars that emphasize their services directly to the online users, such as Google, Yahoo, and Amazon. These toolbars do not require the user to open new browser windows and can target search requests to a specific resource instead of a broad global search. Since navigation is controlled so the user does not need to type the specific web location, the toolbar search is a powerful way to connect users directly into library applications. OCLC WorldCat Local (www.worldcat.org/toolbars/default.jsp) has a toolbar that can be configured to recognize the nearest local library holding for books or other library material based on user preferences.

Early library toolbar adopters

Stanford University's Jackson Library has been using the Fastjack toolbar (www.gsb.stanford.edu/jacksonlibrary/toolbar/index.html) since October 2004 and Houston area Harris County Public Library (HCPL), TX has offered IE and Firefox library toolbars to patrons since 2005 (www.hcpl.net/ebranch/toolbar). Several companies offer software to create customized IE toolbars. Both Stanford's Jackson Library and HCPL used Toolbar Studio/IE Toolbar builder software from Softomate (www.softomate.com/). Conduit offers “free” web-accessible tools for creating community toolbars for IE and customization services, working with

100 college and public libraries (www.conduit.com/).

How to write your own toolbar

The Mozilla open source community has supported development of the Firefox browser to make coding extensions and software plug-ins easy to develop and add innovative browser features. The Firefox development community has created hundreds of freely available add-ons to Firefox and plug-in developers freely share ideas and build on each others work (<http://addons.mozilla.org>).

Development for Microsoft's Internet Explorer (MSIE) is not as open as the Firefox community but software and instructions for developers are available for them to write extensions for the MSIE browser (http://msdn.microsoft.com/library/default.asp?url=/Workshop/browser/external/overview/ie7_opensearch_ext.asp). Library developers can easily create search extensions or toolbar buttons for IE. However, with the introduction of the latest Microsoft Vista operating system some toolbars and extensions written for Windows XP or earlier operating systems may not function correctly. Also, customization features within Vista now allow for features using the Open Search protocol that may make specialized toolbars less in demand.

Firefox has offered customized search since 2006 and in the same year Google released an updated search toolbar with feature similar to Firefox. IE released fall 2006, also included built-in search customization. Each of the three search toolbar options allows users to create keyword searches to any web page. The URL for sending the search is saved in the browser cache and an icon or title for that custom search is created. In Firefox the icon appears in

the toolbar next to the search box. Although each search option works different, all provide an easy search that saves the resulting URL in browser history.

Most browser customization is written to take advantage of unsecured publicly available search sources such as PubMed, Amazon, Google, library catalogs, and Library of Congress. But these same features are not robust enough to navigate secured e-journal database, commercial databases, and subscription-based online resources. Without a secure federated search schema browser customizations in Firefox, IE, Opera, Safari, and others will not be able to properly authenticate the variety of online resources managed by library organizations.

Access restrictions to licensed content in commercial databases are usually authenticated by limited access through Internet Protocol (IP), where the computer IP addressing specific to an organization can be limited to geographical locations, such as library buildings or university campuses. When an authorized user attempts to connect to an online resource the user's computer will prompt the service provider's computers to authenticate the connecting IP number. Once authenticated, a session ID is assigned to remember the session "state". This session URL state is only valid for the current search session so the customization feature of the browser cannot use subsequent sessions as an authentication scheme. Therefore, in the sense that each session is individually authenticated, the toolbar is unable to recognize and grant access without using some other security option, such as secure proxy or VPN.

Online e-journal database vendors have been exploring the potential of OpenID that may allow passing content directly to users in a single URL. Commercial journal vendors ProQuest and EBSCO have been experimenting with this authentication schema to be accessible through Google Toolbar, Firefox, and IE 7 browsers, although each offer methods to modify the search URL as needed so that many e-content databases can be searched from the browser toolbar. The OpenID protocol (<http://openid.net/>) allows for different search queries, such as by author, title, or keyword, to be created. URLs can

also be constructed to use federated search software like MuseGlobal (www.museglobal.com/) from the browser toolbars.

The potential for this search option is appealing but most libraries have various search URLs for different databases and customizing toolbars for each database is not a practical solution. The lack of a single federated search URL may be a growing problem as libraries strive to create a unified search option for users.

How secure are toolbars?

Security concerns remain about privacy associated with toolbars, especially with third-party developers adding toolbars to web browsers. Since the toolbar is attempting to make a search of databases the host library system in the back room of libraries, their service providers, and commercial vendors need to establish controls on exchange of personal information from the user and also limit history of user interoperability with the database. Online users have had concerns with commercial web sites, such as Google, tracking user activity for marketing information without informing users. Some resource developers, such as Conduit, add advertising content to search services to fund the otherwise "free" service, and many third-party software browser extensions include advertising links. Installing plug-ins to online browsers can make them vulnerable to Internet viruses and outside attack from spyware programs or malicious code. In response to these concerns Google and Conduit have contacted customers about what information is added to and collected from toolbar searchers. Another software developer, Toolbar Studio (www.conduit.com/), has taken a different route and now offers software code that allows users to verify that no personal information is collected about the online use activities or attracting advertising content.

To maintain user security, the status of toolbars and plug-ins need to be monitored in the same way as browser updates and software patches. As URLs change and websites evolve toolbars need to be reworked and enhanced to track changes on the target website. As users download toolbars to their

personal computers libraries must make provisions to update toolbar functions as the changes take place. This service expectation should not prevent libraries from exploring the benefits of toolbar applications but these services will require regular updating and attention to user service expectations.

Content interaction

In a July 2007 article, Peter Webster ("The Library in Your Toolbar", *Library Journal* (15 July 2007), URL: www.libraryjournal.com/article/CA6457218.html) writes about content integration between browsers and databases. Many browser software extensions go beyond this search help and can interact with the content of the web pages you are looking at and react accordingly. Firefox offers the capability to program the activities of the browser and react to the HTML that is being displayed. Greasemonkey, a popular Firefox scripting add-on, can make changes to HTML received from particular web sites, adding or removing content or interfacing with that content in some way. Webster describes an example where Greasemonkey scripts have been used to do lookups to library link resolvers from citations on web pages (see "COinS for the Link Trail", *Library Journal*, Summer 2006, pp. 8-10 (www.libraryjournal.com/article/CA6344742.html)).

Book Burro was one of the first library-related browser plug-in applications to mesh with Amazon and other online bookstore web sites. When a book is displayed on Amazon, a Book Burro window displays price comparison information retrieved from other popular online bookstores. Book Burro can also be customized to search your local library catalog or WorldCat local and show if the book is available.

The LibX browser toolbar (www.libx.org/), developed by Virginia Tech, incorporates interactive features with toolbar search to create a search that can offer multiple search field options (author, title, keyword, ISBN). It offers catalog and library database searching but also automates the checking of references found on any web page against the library catalog. It automatically checks ISSNs and ISBNs found in web page references against the catalog and connects journal references

to the library's link resolver. LibX has been customized for use by 61 academic and public libraries, with an additional 86 libraries testing the toolbars. Currently, it is only available for the Firefox web browser, but a version for IE is being developed with a recent Institute of Museum and Library Services grant.

Development resources

Library toolbars blog

Index to current developments in toolbar coding.

(<http://librarytoolbar.blogspot.com/>)

A developing community for sharing computer code for browser toolbar extensions.

Browser extensions: best practices Wiki

(www.libsuccess.org/index.php?title=Web_Browser_Extensions)

A community user wiki for bookmarklets, user scripts, Firefox and IE extensions and plug-ins, code generators, programming resources, and toolbar applications. The site includes programming resources, links to journal articles and conference proceeding papers, and demonstrations of coding examples.

The library toolbar in detail

(www.conduit.com/)

A presentation at the Norwegian knowledge Centre for the Health Services (Oslo, Norway, 15 January 2007) and NTNU Library (UBiT) (Trondheim, 17 and 18 January 2007) by Guus van der Brekel, Coordinator of Electronic Services, University Medical Center, Groningen, Germany).

(www.slideshare.net/digicmb/the-library-toolbar-in-detail)

Recommended links for toolbar resources

LibX

www.libx.org/

Google toolbar for Firefox

www.google.com/tools/firefox/toolbar/FT3/intl/en/index.html

WorldCat search toolbars and plug-ins

Books, videos, downloadable audio books ... if it is in a library near you, these toolbars let you find it in WorldCat no matter where you are on the Web.

www.worldcat.org/toolbars/default.jsp

Vivisimo Toolbar

Download for the toolbar that features a metasearch and clustering function.

www.vivisimo.com/toolbar/toolbar-download.html

Index – Browser Utilities > Search Toolbars

http://dir.yahoo.com/Computers_and_Internet/Software/Internet/World_Wide_Web/Browsers/Utilities/Search_Toolbars/

Firefox Add-ons

Add-ons are small pieces of software that can add new features or tiny tweaks to your Firefox. They can add new search engines or dictionaries in other languages, change the look of Firefox with a new theme, or much more.

<https://addons.mozilla.org/?application=firefox>

www.microsoft.com/windows/ie/searchguide/en-en/default.mspx

Book Burro

<http://Bookburro.org>

Conduit

<http://conduit.com>

Creating OpenSearch Plug-ins for Firefox

http://developer.mozilla.org/en/docs/Creating_OpenSearch_plugins_for_Firefox?

Customizing the Browser Toolbar

<http://msdn2.microsoft.com/en-us/library/aa753592.aspx>

Enter the Library Toolbar

www.libraryjournal.com/article/CA512183.html

FastJack

www.gsb.stanford.edu/library/toolbar

Greasemonkey

<http://greasemonkey.mozdev.org>

Harris County Public Library

www.hcpl.net/ebranch/toolbar

Library search plug-ins from the Mycroft Project

<http://mycroft.mozdev.org>

Open ID

<http://openid.net/>

Open Search

<http://opensearch.org>

Search Provider Extensibility in Internet Explorer 7

http://msdn.microsoft.com/library/default.asp?url=/Workshop/browser/external/overview/ie7_opensearch_ext.asp

Toolbar Studio/EI Toolbar Builder

www.besttoolbars.net

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