Due to the increase in usage of social applications and other Web 2.0 technologies, librarians must embrace some new innovations that are beneficial to their users and that promote the library's presence as the center for information retrieval. In today's world of instant everything, everyone has been exposed to some form of Web 2.0 technology, and higher education is not exempt from its long reach. Gone are the days of the stereotypical librarian gently persuading users to lower whispering voices. The next-generation librarian comes fully loaded with iPhone and BlackBerry; he or she has the ability to maneuver in the Web 2.0 world of social applications.

We are both librarians—Paula works at the University of South Alabama Library as the reference and electronic resources/government documents librarian, and Muriel serves the same institution as the monograph cataloger. As librarians, we know, as you know, that one very important part of our jobs is to meet the needs of our users. What can we do to reach the students who walk away from the OPAC and out the



door because they could not find what they were searching for? How can we help ease the library anxiety some students experience and get them to use the library as the first stop for discovering information and locating resources?

fritterratellitertes

Over the last 5 years, many articles have addressed the use of Web 2.0 technologies and the application of them by public and academic libraries. If you have attended a library convention within the last 3 years, Web 2.0 is the catchphrase to use to attract librarians to sessions aspiring to enlighten them about this mystical world of information sharing and collaboration.

Libraries of all types are incorporating Web 2.0 features to attract users as well as to showcase library services. The OPAC has become more user-friendly with libraries placing interactive interfaces on the traditional catalog. These interfaces on the OPAC allow users to have more success with searches, specifically with the use of folksonomies and tags. In her November 2006 Library Media Connection article "Subject Headings 2.0: Folksonomies and Tags," Jessamyn West defines "folksonomy" as "categorizing by folks" and "tags" as keywords that can describe the content without using a classification scheme. By using tags, the library users are given the choice to create their own "minicatalog" of resources. They can create keywords they are personally familiar with and want to use.

Obviously, there are fundamental differences between traditional cataloging and folksonomies. Catalogers create and enhance bibliographic records while maintaining the standards and principles of the Anglo-American Cataloguing Rules (AACR2). These established principles and rules are used to assign subject headings based on the topical scope of the item. Elaine Peterson, author of the 2008 Library Philosophy and Practice article "Parallel Systems: The Coexistence of Subject Cataloging and Folksonomy," refers to this as the topdown approach to subject cataloging.

By Paula L. Webb and Muriel D. Nero

In complete contrast, folksonomies are created by the user, not the professional cataloger. Users can label or tag content based solely on personal preference. It appears that tagging would allow more choices to identify content, whereas traditional subject cataloging would restrict or limit choices.

Tags do not replace Library of Congress (LC) subject headings, but additional keywords put in by patrons could enhance the value of the OPAC.

Choosing OPACs and Evaluation Techniques

This is how we decided to study LibraryThing, PennTags, Encore, and AquaBrowser. Because we are academic librarians, we only wanted to view academic libraries with these interfaces on their OPACs. Some internet searching

brought us to San Francisco State University's choice of LibraryThing. The University of Pennsylvania was an obvious choice because it created its own tagging software, PennTags. And, after viewing the Encore and Aqua-Browser websites, we chose academic libraries from their customer list. St. Lawrence University is using Encore. Harvard began using AquaBrowser in April 2009.

We decided we would use a system developed by Jakob Nielsen to evaluate these library catalogs. Nielsen is famous for his 10 principles for user interface design—principles referred to as heuristics. Heuristic evaluation is a usability inspection method. We modified his "Ten Usability Heuristics" standards to evaluate the OPACs of the four academic libraries:

1. Visability of system status: This is the ability to actually see the software on the webpage.

2. Match between system and the real world: It should use words and concepts that are familiar to the user rather than words that pertain to the system or the library. Language usage should be seamless between the different "collections" the tagging software is connected to. It should also be able to catch spelling errors, especially before they become a tag.

3. User control and freedom: Patrons need to clearly see exits and have the ability to leave an unwanted state without having to go through a lot of trouble. We decided the users should not feel "trapped." They also need to be able to access interlibrary loan, databases, and other standard library systems.

4. Consistency and standards: Patrons should not have to wonder what a word, situation, or action means. The

Library	Library Catalog	Interface
San Francisco State University J. Paul Leonard Library	InvestiGator http://opac.sfsu.edu	LibraryThing
University of Pennsylvania Penn Libraries	Franklin www.franklin.library.upenn.edu	PennTags
St. Lawrence University Libraries	ODYsseus www.stlawu.edu/library	Encore
Harvard University Libraries	Hollis Classic http://discovercs.hul.harvard.edu	AquaBrowser

software needs to be user-friendly with a small learning curve.

5. Error prevention: This is a design that prevents a problem from occurring in the first place.

6. Recognition rather than recall: Minimize the user's memory load by making objects, actions, and options visible. Instructions or help for use of the system should be visible or easily retrieveable.

7. Flexibility and efficiency of use: Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users.

8. Aesthetic and minimalist design: Dialogues should not contain information that is irrelevant or rarely needed. We are flexible with this particular perspective since it is hard to decide what is important information and what is not.

9. Help users recognize, diagnose, and recover from errors: Error messages should be expressed in plain language (no codes). They should indicate the problem and constructively suggest a solution.

10. Help and documentation: Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search. It should focus on the user's task, list concrete steps to be carried out, and not be too large.

LibraryThing/San Francisco State University Library

We begin our evaluation of folksomony tagging webware with Library-Thing. At last count, LibraryThing was the official OPAC feature for about 140 libraries. In the article "Innovations Affecting Us—Enhancing the OPAC through LibraryThing," Tim Spaulding, LibraryThing founder, stated, "I think LibraryThing

for Libraries has shown the way when it comes to catalog enhancements. By putting the content directly into the catalog, Library/Thing has done something Syndetics and Novelist and so forth should have done, but didn't."

While LibraryThing is successfully paving its way into the library market, does it meet our standards ranking system? In regards to visability, you are unaware that LibraryThing even exists in the catalog until you get to an actual bibliographic record. Only after you open the record can you see the words "LibraryThing Tags," but they appear as a tag cloud to the right side of the webpage. In the typical tag cloud format, you see the larger text for items referenced more than those in smaller text. We were unable to find a way to switch between a tag cloud and a tag list using this webware.

We found the software seamless in usage of terms and working with the current OPAC. We discovered that it requires no back-end integration, especially when the OPAC is Voyager. However, we did a search for a number of often-misspelled words—"goverment," for example—and while the typical catalog would catch and apply the misspelled word, LibraryThing did not compensate for this factor.

The learning curve for LibraryThing is very small. If the user is familiar with using the catalog, he or she should not have a problem finding and using LibraryThing effectively. We also found simple instructions available when needed by clicking the "What's this?" link on the Tag Browser page.

It is obvious LibraryThing is good for single-word searching related to your subject, but what about phrase searching? The keyword search will accept Boolean and keyword phrase



*

COMPUTERS IN LIBRARIES opacs in the clouds

St. Lawrence University Libraries in Canton, N.Y., is an academic library that uses the Encore interface. The Encore tab is located in the search box next to ODYsseus, the traditional catalog search box. When you click the Encore tab, the search

PennTags PennTags books cataloging census City_planning Copyright data database denoy education a film, Netory film, music google history inemational Internet law itement libraries they mapping maps in movies music new_york open_access penn_affiliated_bn pervertage philadi advantative is classified atta electric black to be before the transports	endramment justice fair_use film vota modicine medieval aludies metadate eliphia piracy psychicanelysis research ation	Exercise y tegits" I post 1 stand Subscript to this ange assess assessment assessmential subjects entite a new propert Totatis balance General tetropropium
solonuntrip_is_stranging statistics stats strategic_planning tagging technology to_read 11 of 13 por to	ELIONI urban, studies vet, home web2.0	Es Ask Unition Help
Women	*	stev oll + projects
Ababaot	copy	• center
If a digital filture project is to be autoreshid, the project month to be run in a protestibular merver, using undert menagement is determined includes and a schedule, postraling the scope of the merupe merupe to be a multificated lander on well as to brinkely entry.	i cul adme of the tical importent expects of project e project, and daveloping expectas. In order to accomplish	
International Journal of Project Hanagement : The skills and career path of an attactive project manager	dopy	
regges probled, neurogeneration, read in addition		
Projact Menagement Institute	6609	
Walcome to Project Management Institute	201012	
"Will it the building globel association for the project management protession. Since our founding in 1989, we have even at the lorefront of working with matrix	two elsebuilt transmission thicks of all	

searching. In addition, it will look for complete titles under keyword search instead of the user needing to place quotes around the phrase.

We have discovered a shortcoming that LibraryThing stated it is working on: It currently will only accept batch loads that use ISBNs; it cannot integrate ISSNs or any other coding format for CDs, DVDs, and other forms of media.

What if the book is unavailable? LibraryThing does allow you to link to your library's ILL request form, but you cannot add your own tags to the LibraryThing collection for later reference. What if the book you are looking for, the tagged book, is not available, but there is a previous edition that *is* available, but no one has tagged it? We also discovered that if the book was not available, you had the ability to search for related books, but not the actual book.

PennTags/University of Pennsylvania

PennTags is the title of the University of Pennsylvania's tagging webware that was built in-house. Unlike San Francisco State's catalog, this tagging system is used independently from the main library catalog, Franklin. What makes it complicated is its lack of visibility. Penn-Tags is located at the bottom right of the main library page; you have to scroll down to find the link in its toolbox.

When we looked at the tag cloud on the PennTags linked site, we could see real-world terminology, but it was intermingled with terms that only apply to the university. We were confused at the terms—penn_affilated_bn, libment, and to_read. This concept also applied to consistency and standards and the huge learning curve of PennTags.

The layout of the page brings us to the next challenging situation in working with PennTags. PennTags does have instructions, but you have to find where it keeps them. (They are located at the "about" link on the top right of the page.) Only then do you discover information about how to use tags. It appears to us this page is designed strictly for the expert user and not the novice user. We wondered if this was the intent of the creators of PennTags from the beginning.

Encore/St. Lawrence University Libraries

Innovative Interfaces is the library technology company that provides the Encore discovery services platform. Encore was first previewed for library use in 2006. Encore works with libraries' ILSs and therefore does not replace the traditional catalog. From the information found on Encore's website, this is a next-gen library interface that offers a "suite of applications and web services that delivers a universe of information in ways that are intuitive, relevant, and, perhaps most important, familiar to today's internet users." box opens with "search for books, videos, digital collections." A "Learn about Encore" link is displayed underneath the search box. When you click this link, users are given an explanation of what Encore is and how to search using this new interface. This help page answers the following questions: Will Encore search the same resources as the catalog? How do I search Encore? Can I narrow and broaden my search? We found this information very straightforward and necessary before trying an Encore search.

When you perform an Encore search. results are displayed in the center of the screen ranked in order of relevance. Items can also be sorted by title and date. On the right side of the screen, the tag cloud is displayed. The tag cloud displays other keywords associated with the searched-for word or phrase. You can click on any tag to refine your search. The tags offer users other keywords closely associated with your initial search. The right side of the screen also shows materials recently added to the collection that reflect your search. There is also an "articles and more" option that users can use to locate information in the databases.

Reline by 1a

african american COOKERY african american women african cookery american cookery chickens COOKERY food habits tood preferences holiday cookery kenya kenyan cookery kwanzaa meat social norms

COMPUTERS IN LIBRARIES opacs in the clouds



Encore is strictly for searching in the catalog. Students, faculty, staff, and other patrons have to log in to access the database collection. The left side of the screen is a facets list. The library collection is refined by search found in, format, location, language, and publish date.

When you click on a title, the record display is impressive. There is cover art of the item, bright font colors, and clip art to help you find what you are looking for immediately. You are given several choices such as "add a tag." However, you must log in to use and view this feature.

Overall, we were very impressed with the Encore search experience. It is userfriendly and visually appealing. A misspelled word will garner a "no results found" message; however, you are given tips to try the search again, as well as a "Did you mean" message with the correct spelling. It does not look like a traditional catalog, and it uses some features that closely resemble other applications found on all internet retailers-specifically the "add to cart" option. However, if you are not ready for change, users are given the option to search using the regular catalog. The classic catalog link is clearly displayed while in any phase of an Encore search or result page.

AquaBrowser/Harvard University Libraries

Developed by the Dutch company Medialab Solutions, AquaBrowser was first implemented in a public library in the U.S. in January 2005. AquaBrowser claims to be the first discovery platform to appear in the market "offering visual, faceted searching that connects to any data source, is used at more libraries around the world than all other discovery layer and next-generation user interfaces combined." After viewing the product webpage, we were eager to see how this interface performed.

Harvard University is testing Aqua-Browser as its new library catalog interface. In the April edition of the online newsletter The Harvard Crimson, the library announced the testing of a userfriendly interface that would take advantage of social networking features.

When you go to the library catalog, AquaBrowser is not prominently displayed. Hollis classic is the regular catalog, but you can get to the AquaBrowser interface if you click on "Have you tried a new version of Hollis?" Once on this page, there is a welcome message to Harvard's new discovery system, but it does not mention AquaBrowser as the name of the new search interface. There is an explanation of how to use this new search tool, a link for feedback and suggestions, and a list of future developments. We found this information most helpful, especially the future developments list. Immediately, we were aware that patrons could not tag records. AquaBrowser does offer a "My Discoveries" feature that gives users the ability to tag, review, and rate library materials. The help button, located at the top right-hand side of the screen, gives you access to more detailed information about how to use the system.

Like Encore, AquaBrowser has one search box. When you perform a search, the results are listed in the center. (The results can be sorted by relevance, year, title, and author.) In addition, a word cloud is displayed on the left side of the screen. This multicolored word cloud is generated by the AquaBrowser library and offers suggestions to help you find the best search term. You can click on the tags in the clouds to bring up a new results list. The right side of the screen displays a "show results from" option, which allows you to choose a Harvard department location. For instance, if you choose Afro-American Studies, only items from that location are shown. There is also a refine menu to narrow your results by an array of categories.

When you click on a record from your results list, the word cloud is still displayed on the left side of the screen. You can also access other library features such as "find articles," "export record to Endnote," and "export record to Refworks" with a Harvard library login.

Visually, Harvard's use of Aqua-Browser was not appealing. However, it is user-friendly and fairly easy to navigate. If you misspell your search word, the "Did you mean to search for" note is displayed, as well as a word cloud with other suggestions. If you prefer the Hollis Classic catalog, you can easily switch to a traditional search.

Conclusion

Whether provided by a company or created by their own institution, OPACs that offer social applications are becoming more popular in academic libraries. Due to the increase in usage of social applications and other Web 2.0 technologies, librarians must embrace some new innovations that are beneficial to their users and that promote the library's presence as the center for information retrieval. After reviewing the OPACs of four academic institutions, we can see the value in using an interface. Encore and AquaBrowser already have impressive customer lists of all types of libraries worldwide. In our opinion, a library 2.0 catalog would increase the value of the OPAC and definitely increase usage. As with any new technology, only time will tell if tagging is a temporary trend or something that will grow with time.



Paula L. Webb received her M.L.I.S. from the University of Alabama. She is currently the reference and electronic resources/government documents librarian at University Library of the University of South Alabama. Her email address is pwebb@jaguar1.usouthal.edu.

Muriel D. Nero has an M.Ed. from the University of South Alabama and her M.L.I.S. from the University of Alabama. She is currently the monograph cataloger at University Library of the University of South Alabama. Her email address is mnero@jaguar1.usouthal.edu.



COPYRIGHT INFORMATION

TITLE: OPACs in the Clouds SOURCE: Comput Libr 29 no9 O 2009

The magazine publisher is the copyright holder of this article and it is reproduced with permission. Further reproduction of this article in violation of the copyright is prohibited. To contact he publisher: http://www.infotoday.com/