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Innovations Affecting Us — Social Bookmarking and User-Driven Classification

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Searching the Internet for information often leads to having folders upon folders full of bookmarked pages. That statement is true for me, and I suspect that it holds true for others as well. Whether casually surfing the Internet or searching for specific information, I tend to bookmark every page I look at that might be remotely useful in the future. As a result of this behavior, I have over 200 pages bookmarked in my Internet browser’s bookmarks manager. Two hundred Web pages really isn’t very many, but when you’re trying to quickly get to a Web page that you know you have saved somewhere in your browser’s bookmarks manager, scrolling through a long list and sorting through folders and sub-folders can be a frustrating and ineffective way to locate a page. Half of the time, if I cannot quickly locate a link in my browser’s bookmarks manager I do a quick Google search to find the site again.

What is a possible solution to a situation such as the one I just described? Is there a better way to manage my bookmarked pages? One approach to organizing electronic information is a quickly growing, ever evolving phenomenon called social bookmarking.

What is Social Bookmarking?

Social bookmarking is a tool for personal knowledge management that allows users to bookmark Web pages and Websites on a public Website, “tag” these bookmarks with keywords of their choice, and share their bookmarks with others using free, Web-based services such as Furl, del.icio.us, Jots, and Spurl, among others. This method of managing bookmarks differs from the more familiar method of bookmarking that allows users to save the addresses of Websites only to their computer for their own future reference. The different social bookmarking services available today share similar features that separate social bookmarking from bookmarking in your Internet browser. These common features among social bookmarking services include the presence of personal user accounts, a mechanism for adding links, comments, titles, and descriptions, bookmakrets in the Internet continued on page 78
Innovations Affecting Us

from page 77

browser to facilitate entry, search by user or tag, RSS feeds, extensions such as browser plugins, querying of links based on popularity, and classification by open tagging.1

How Does Social Bookmarking Work?

Social bookmarking services are available on the Web and usually require free user registration. Registration allows the user to choose a username and password and also creates a page for their own bookmarks on the social bookmarking service Website. Once registered, the user can install a bookmarklet to his or her browser toolbar which is used to quickly save Web pages to the user’s social bookmarking page. When a user finds a Web page that he or she wants to save, that user can click on the bookmarklet in the browser toolbar to save the page to their bookmarks site, enter desired information about the page such as comments, a description, or keywords, and save it to their page of bookmarks.

Social bookmarking offers an innovative method of organizing and sharing electronic information. When a user saves a Web page as a bookmark to a Web-based social bookmarking site, he or she has the opportunity to assign freely chosen keywords or “tags” to each bookmarked page. The tags chosen for bookmarks often reflect the user’s perception of the Website. For example, I may save the URL for an online knitting magazine and tag it with the term “knitting” while others may use the terms shopping, yarn, patterns, knit, clothing or anything else depending on how they use and view that particular Website. It is also possible to tag bookmarks with multiple terms so that same URL could be tagged with one, all, or any combination of the tags I just mentioned. This user driven approach to organizing information is often called a folksonomy or social classification. A folksonomy is a method of organization based on keywords chosen by users. This approach to categorizing information results in a flat, or non-hierarchical, organization of information contrasting with the traditional, often hierarchical, methods of organizing information using controlled vocabularies, taxonomies, and other formal classification systems.

After bookmarks are saved and tagged, a user can view his or her list of bookmarks by logging in to their page through their social bookmarking service. Once on their page, the user has the ability to scroll down the list, search by keyword, or click on a particular tag from those created by the user.

Some Benefits

Social bookmarking has several benefits that users enjoy and find advantageous. Using social bookmarking is valuable to users for different reasons, some of which are discussed here.

First of all, a user can search through his or her personal bookmarks using the terms that he or she chose to describe those bookmarks. This use of folksonomy can make it easier for users to save and retrieve their own bookmarks from their social bookmarks page.

Second, the bookmarks are saved using a Web-based social bookmarking service so they are accessible from any computer that is connected to the Web. Traditional bookmarks, on the other hand, are only accessible from the computer that they are saved to. Imagine if a user is working on a project or paper from a remote location. Using a social bookmarking service the user can access his or her saved electronic information no matter where they are.

Third, social bookmarking can lead to the discovery of new online resources that a user may not have found when searching through the thousands of hits retrieved with an ordinary search engine query. When a user tags a bookmark with a specific keyword, he or she can see how many other people have chosen that tag and what pages they associate with that particular tag. For instance, if a user tags a bookmark with the word “computers,” he or she will be able to see how many other people have tagged bookmarks using the term “computers” and what pages are tagged with that term.

Similarly, social bookmarking lets users view how others are tagging pages that they bookmark. If a user saves a certain page and tags it with the term “animals,” that user can also see how many other people have bookmarked that particular page and what terms they use. This can be beneficial for the user that is looking for more information on a particular topic because the user can then search the social bookmarking site with tags others have used to find related pages that have been bookmarked. Users can also see who else has saved certain pages and look at their bookmarks list to see what other pages that user has saved, the idea being that the users may have similar interests and can discover new resources from each other’s list. This benefit can be further enhanced if a user decides that he definitely likes another user’s bookmark list because each list can be subscribed to with an RSS feed, providing regular updates on additions to certain lists.

Some Drawbacks

Social bookmarking is an open Web-based service that allows anybody who uses the service to view anybody else’s bookmarks, thus leading to concerns about privacy. Some social bookmarking services are addressing this issue by allowing users to make certain bookmarks private, but this is not yet a common feature of available services.

Another possible drawback to social bookmarking lies with the use of folksonomies. Some may view the fact that amateurs are doing the tagging as a downside to social bookmarking. Others may see that as its beauty.

No matter which view, allowing the general public to assign terms to resources, rather than using a controlled vocabulary, can lead to inconsistent tags. Some social bookmarking services attempt to correct this by suggesting tags for users to assign to their bookmark based on the tags that others have chosen for that same page.

Also, social bookmarking services are not immune to the familiar problem of spamming. Tag spamming can occur when several users join a service at one time and bookmark the same page and apply the same tags to that page. It can also occur when users intentionally apply unrelated tags to bookmarks. Some social bookmarking services are already working to prevent spamming from becoming a problem.

Social Bookmarking and the Library

Social bookmarking is extremely useful for individuals who want to keep track of and share bookmarked Web pages, but can this relatively new technology be applied to libraries? Social bookmarking may allow libraries to provide more user-centered services.

Social bookmarking has the potential to affect how users search the online catalog by making the catalog searching experience more interactive and collaborative. If users can find materials of interest in the catalog, save them to a social bookmarking site, and tag them in such a way that the user-generated tags also appeared with the catalog record, how would that change how users found information? Users could quickly access materials records by searching their own bookmarks site using their own tags or keywords. In addition to searching the catalog using controlled vocabularies, a user could also browse the catalog by user-generated tags. It is important to note that applying social bookmarking to the catalog does not mean that controlled vocabularies should cease to exist, but only that they can co-exist with folksonomies.

Libraries can also use social bookmarks to develop a “materials of interest” or “hot topics” page on the library Website that displays the most popular tags from the online catalog. This aspect could be used to display the most frequently tagged materials, or to create user interest in a particular topic. It could also be used to reference librarians by demonstrating how users actually perceive, based on how records are tagged, library materials.

Some social bookmarking services, such as Connotea and Citelike are geared towards the academic user community, allowing researchers to save links to their favorite Web pages and article references and apply their own tags to the links. These services are already incorporating some library services into their features. Connotea provides an example of how social bookmarking sites can work to enhance library services. In some instances, a user can enter the location of his or her institution’s OpenURL resolver, and Connotea will create links on the bookmarks page that let the user look up their institutions holdings for some bookmarked resources. So using a service such as Connotea, the user can save many links, tag

continued on page 79

http://www.against-the-grain.com>
them using their own terms, search for their articles, and find out what their library’s holdings are all from one site. When researchers have to search multiple databases and other resources to gather information, having all of those resources bookmarked on a Web accessible site can save the user valuable time when they need to review their sources.

Social bookmarking tools and services are still evolving, and their use is growing quickly. As with any evolving technology, there are drawbacks such as user privacy and accessibility, but the popularity of social bookmarking indicates that the benefits outweigh the negative aspects of social bookmarking. These services are presenting a new and user-friendly approach to organizing and finding information, and libraries would do well to take an active part in their development.

Some SocialBookmarking Services

What follows is a brief list of available social bookmarking services. This is not an exhaustive list of services currently available, but these services provide a good place to begin learning about social bookmarking and how it can work for you.

del.icio.us (http://del.icio.us)  Furl (http://www.furl.net)
Flickr (http://www.flickr.com)  BlinkList (http://www.blinklist.com)
Jeteye (http://jeteye.com)  Spurl (http://www.spurl.net)
de.lirio.us (http://de.lirio.us/rubric)  CiteULike (http://www.citeulike.org)
Connotea (http://www.connotea.org)  Yahoo! My Web 2.0 (http://myweb2.search.yahoo.com)

For more information on available social bookmarking services, Roxomatic’s comparison of nineteen available social bookmarking services is available for PDF download from http://www.inox.de/file_download/3.

Endnotes

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As a part of the work I am doing at SirsiDynix on the Library Normative Data Project (NDP), I have been investigating trends observable in public libraries in the US. This is a report of what I have found so far and is a revision of preliminary work on the NDP Website which you can refer to for more detail. What I have found so far is that the public libraries in the US — looked at as a national system — generally did well in what we measure quantitatively over the period from 1992-2003. The last few years, however, have shown signs of strain.

For a brief context, the NDP integrates data from a variety of sources, including national and state-level data, to create a comprehensive database. Information on circulations and holdings at contributing libraries is then used to produce reports for the US National Center for Education Statistics (NCES) Public Library Survey. When I was at the US National Commission for Libraries and Information Science (NCLIS), I compiled several NCES annual series into longitudinal files so that one could then do trend analysis. Two of these datasets are integrated into the NDP, also. For this analysis, I use the State Summary data, a series that has summary data for each state’s libraries by year. This data is the best use for national assessments of public libraries in the US. The data are available on the NCLIS site.

If one looks at the entire interval from fiscal year 1992-2003, there is good news. Public Libraries in the US grew from a reported 647 million volumes in 1992 to 802 million (24%) in 2003. Income grew from $5.0 billion to $8.7 billion (74%), and expenditures rose from $4.5 billion to $8.3 billion (84%). The number of library “outlets” (branches, central libraries, and bookmobiles) increased 2.7% from 16,840 to 17,299 while library systems increased 3% to 9,214 from 8,944. There were more people visiting libraries (from 932 million to 1.3 billion) and more total staff to help those visitors as staff increased from 110,000 to 136,000.

That is a lot of numbers to absorb quickly but the trends looked at this way are all positive.

A major concern to public librarians is the notion of “population served” by the library and from that, they calculate per capita ratios. Sure income went up, but so did population. Did Public Library per capita expenditures...or income...or whatever...go up or down? Per capita is also a way of balancing the differences in raw figures we find in public library data that reflect the vast differences in the size of the libraries. With these ratios we can compare how my state or library did compared with others? In fact, one of the most consulted sets of tables done by NCES is the State Rank Order Tables, a set of 22 tables with per capita rankings by the states. Now, population served increased from 243 million to 280 million or 15% over the period...did libraries keep up? Briefly, yes, the trends we see in these per capita figures are also positive. As a national system, public libraries in the US kept up with the increase in population for the entire period.

However, when we look at the data annually and take into account inflation in the financial variables, a more complex picture emerges and recent years have shown stark declines and evidence of libraries adjusting to new realities is reflected in the variables we have.

About the late 90's, depending on the variable you examine, financial figures indicate that libraries budgets were not keeping up with increases in their costs. This fact can be seen in raw figures and in the per capita figures. One long-term trend presages what we are seeing now.

Income received in libraries is greater than operating expenditures but income goes to things other than operating — such as capital expenditures. Over the period, income rose 74% while expenditures rose 83% as libraries squeezed more income from expenditures. The per capita shows that 91% of income per capita was expended in FY1992 while in FY2003 the comparable figure was 95%.

What happens when there is no more room to trim? Per capita expenditures on collections fell nationally from $41.9 in 2001 to $41.8 in 2002 and further to $4.12 in 2003. Current serial subscriptions fell from a high of 7.5 per 1,000 population in 1997 to 6.79 in 2003. For the first time in this series, the total staff fell in 2003 — after years of steady increases on the order of 2,000 or so a year. As I said when I first analyzed these results, libraries were eating their seed corn.

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Against the Grain / December 2005 - January 2006 <http://www.against-the-grain.com> 79