
Collaborative Tagging: A New Way of Defining Keywords to Access Web Resources

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Abstract

The main feature of web 2.0 is its flexible interaction with users. It has been introduced ample of services where user is the central part. Collaborative tagging is also a product of Web 2.0 which can play an important role in the knowledge organization. Collaborative tagging is a new way to assign key words to internet resources by its users. This paper will give an overview to collaborative tagging, some tagging tools and some examples related to library field.

Keywords: Collaborative Tagging, Social Book Marking, Web 2.0

1. Introduction

Web 2.0 has been receiving a lot of attention over the last few years. It is considered as the second generation of web, where users are the masters. The main feature of Web 2.0 is its flexible interaction with users. It has been introduced ample of services where user is the central part. Collaborative tagging is also a product of Web 2.0 which can play an important role in the knowledge organization. The exceptional growth of information resources on the internet and the WWW has necessitated the need for more effective approaches for organizing information to achieve improved discovery. There is an increasing need to exert control over the mass of digital information that we accumulate on a daily basis. The concept "knowledge organization" came into picture to solve this problem. We are familiar with different knowledge organization tools like classification schemes, Ontologies, taxonomies etc. The traditional knowledge organization tools, which is based on experts or authors point of view. But the collaborative tagging or social bookmarking is a knowledge organization tool from the user side.

2. Collaborative Tagging

Collaborative tagging describes the process by which many users add metadata in the form of keywords to share content. The collaborative tagging has grown in popularity on the web, on sites that allow users to tag book marks, photographs and other contents. (Golder and Huberman, 2005). Social bookmarking is a mechanism to bookmark the links on the web using a social bookmarks manager, which allow the users to store web links online with some descriptors or key words called tags. (Kumar and Aswath, 2007). Folksonomy is an internet –based information retrieval methodology consisting of collaborative generated, open-ended labels that categorize content such as web pages, online photographs, and web links (Spiteri, 2007). Folksonomies can make significant contribution to public library catalogues by enabling clients to create and organize their own personal information space in catalogue (Spiteri, 2007). The development of folksonomies may reflect also the difficulty

and expense of applying controlled vocabularies to the web (Fitcher, 2006). Folksonomies can easily accommodate new concepts than a controlled vocabulary (Fitcher, 2006). A folksonomy is a taxonomy in that the author of labeling system are the main users of the content to which the labels are applied can be called as 'distributed classification system' (Noruzi 2007). Collaborative tagging (also known as folksonomy, social classification, social indexing and other names) is the practice and method of collaboratively creating and managing tags to annotate and categorize content. In contrast to traditional subject indexing, metadata is not only generated by experts but also by creators and consumers of the content. Usually, freely chosen keywords are used instead of a controlled vocabulary (www.wikipedia.org). It is a bottom – up social classification, unlike traditional approaches to library classification (Vender Wal 2004).

Collaborative tagging became popular on the web with social software applications such as social bookmarking and annotation of photographs. Websites that support tagging and the principle of folksonomy are referred to in the context of Web 2.0 because participation is very easy and new tagging data is used in new ways to find information. Tag clouds are frequently used to visualize the most used tags of a folksonomy. Folksonomies help to discover a body of information. It can be considered as a shared vocabulary, which makes the search easier. "A tag is a (relevant) keyword or term associated with or assigned to a piece of information (like picture, article, or video clip), thus describing the item and enabling keyword-based classification of information it is applied to." (www.wikipedia.org). Collaborative tagging reveals the users point of view about a particular information source. It is the user generated metadata for the information sources by its users.

The terminology about user generated tags is still confusing. The popular terms include, Collaborative tagging, shared tagging, user tagging, social bookmarking, collaborativebookmarking, folksonomies, tagsonomies, tagonomies, collabularies, tagosphere, folksonomic zeitgeist, ethenoclassification, distributed classification etc. The most popular term "folksonomy" was introduced by Thomas vendar Wal in 2004. It is a fusion of words folk and taxonomy, were folk is the user. But the term 'collaborative tagging' will be more suitable, were the tagging is done in a collaborative way.

3. How to do Tagging

The social bookmarking tools help the users to tag their favorite item. The bookmarking may be a website, photographs, books, blogs and even tag. There are sites which provide provision to do tagging at free of cost. (Ex: del.icio.us, flicker, Connotea etc.). The user can open one account in these sites to store their bookmarks. A tag includes the name of the URL, title of the resource, comments or annotation, key words, name of the user and the date in which it created. Most of the sites are doing the periodical verification of the bookmarks. The user can also see the related bookmarks and the tags they are used. Each user will get personal page to display the bookmarks, which will contain all the bookmarks, the user have ever created. The bookmarks will be arranged in reverse chronological order with all the tags.

The user chooses a tag that is meaningful to him or her. In most sites it has to be a single word. Once the tags have been assigned, they act as index terms and they may be public or private. When they are public, the tags together can all be searched by all users, creating a "folksonomy".

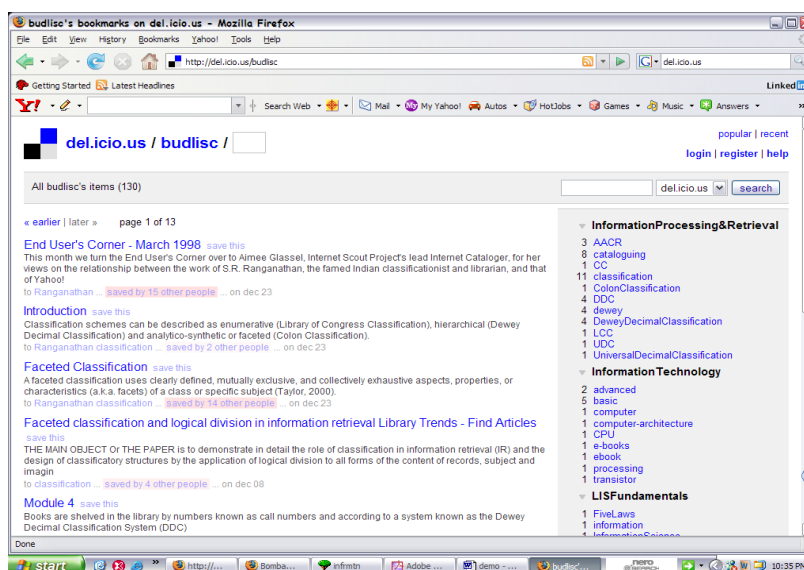


Figure 1. Example for Tagging from the Site 'del.icio.us'

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Classification schemes can be described as enumerative (Library of Congress Classification), hierarchical (Dewey Decimal Classification) and analytic-synthetic or faceted (Colon Classification).

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A faceted classification uses clearly defined, mutually exclusive, and collectively exhaustive aspects, properties, or characteristics (a.k.a. facets) of a class or specific subject (Taylor, 2000).

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THE MAIN OBJECT Or THE PAPER is to demonstrate in detail the role of classification in information retrieval (IR) and the design of classificatory structures by the application of logical division to all forms of the content of records, subject and imagin

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Figure 2. A Single Bookmark

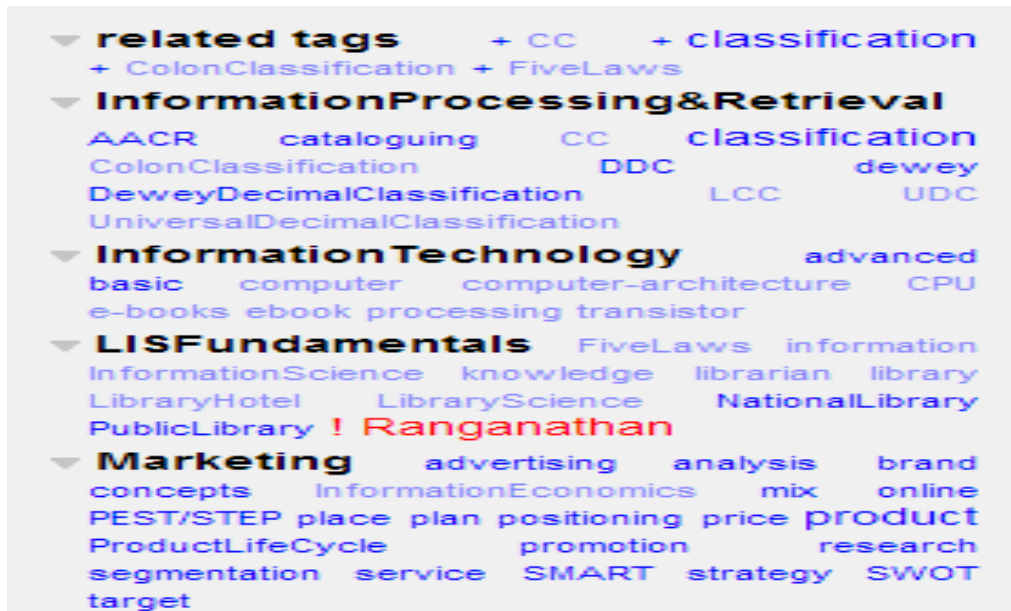


Figure 3. Tag Clouds

The common bookmarking tools:

- Del.icio.us –Book marks
- Flickr- Pictures
- Connotea- Academic links
- CiteUlike- Academic links
- Furl- Provide blog environment in which the user can store both text/web page and links
- Technorati – For blogs
- Unalog- For academic links
- Library Thing - Books
- Tagalag-People
- You tube-Video
- Odeo - Pod casting

4. Who does the Tagging?

Different sites using different ways for tagging. Some sites user can directly add tags, but some sites using the help of experts. For example in Flickr the owner of the picture will give the tag. In site like News.com the editors giving tag to the news items. Another approach is using an application to

collect RSS feeds and use the keywords from them. In some sites the users can upload their own sites.

5. Benefits of Tagging

The collaborative tagging reveals the vocabulary of users rather than an expert. It is up to date as it can include new concepts. It is offering a new way to organize web resources, where one can gather all the related resources in a particular field. It will increase the chance to find out a particular resource. Another advantage of collaborative tagging is that it helps to connect people having the same interest. The tags help to identify the topic of the bookmarked items (any web resource), "*what it is about and what kind of thing it is*". It reveals the qualities and characteristics of the resources. It can be used in academic environment like course related references etc (BUDLisc by Dept.of L.Isc, Bangalore University). Compared to any traditional taxonomy it is multidimensional as one bookmark can belongs to different tag groups.

As these tags are open to every body, it promotes the sharing of information. Many enterprises use social bookmark managers to create a virtual world of productive information for the people in the enterprise (IBM's Dogear).

6. Some demerits of Tagging

Like any other uncontrolled vocabularies the user defined tags also share problems, such as ambiguity, polysemi, synonymy etc. Different sites follow different rules to add tags such as single word tags and multi word tags etc. Different grammatical forms of words such as nouns (like singular, plural etc.), noun phrases, and adjectives are also creating confusion. Variation in spelling is another problem. Use of abbreviations and acronyms will also decrease the chance to discover the resource. Other common problems include neologism, slang, jargon etc. The use of personalized terms like 'me','my world' etc. will also affect the usability of the collaborative tagging. There is no explicit relation between the terms. Another important factor is that user oriented views of knowledge organization will depends on the individual and his or her cognitive structure, so a solution acceptable to every body is not possible.

7. How to overcome these problems?

A combination of both user defined tags and controlled vocabulary will help to use the maximum benefits of the collaborative tagging system. There are projects like 'myedna' supported by the government of Australia working in this field. Adding more keywords to resources will help to reduce the ambiguity. Making clusters of related tags and associate clusters with ontological concepts is also another solution. The problems related to spelling can be avoided by checking the tags with online dictionaries. To avoid the synonyms we can use tools like 'wordnet-synsets'. Making clusters based on the related tags rather than related URLs will also useful.

8. Tagging and Libraries

The Digital libraries can also use this service, where user will get a personal space in OPAC to express their view about a document. Ann Arbor District Library (AADL) has developed a tool SOPAC integrated into the library catalogue, where the user can rate, comment on and tag items. In the academic sphere, the University of Pennsylvania's Penn Tags project has been developed for readers to tag catalogued items. Some libraries are using the tagging in to provide the book review services, where users can write reviews about the books and can tag them, so that users can get other book reviews related to a given tag. The libraries can use tagging to give reference list, by opening an account in any website providing tagging service or as an in built package.

9. Conclusion

'Web 2.0' is the term referrers to the new face of World Wide Web, where consumers are also contributors. It is the world of "generation C". The alphabet C stands for content, creativity, consumption and connected. (Dye 2007). Collaborative tagging is also a part of Web 2.0 as a tool to resource discovery on the web. It can be considered as a step to make the Web more semantic.

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