Medical Information Library & Knowledge: MILK or discovery of scientific information on health through social labeling: Connotea and CiteULike

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Abstracts In this paper we would like to present the second phase of a Network Collaborative Project between medical libraries belonging to different institutions, located in different geographical areas and with different aims, objectives and interests (some of them focusing on research and teaching and other on medical practice). The main goal of this project from its conception has been developing an open, flexible, adaptive medical library, promoted by the community of participants, with the ultimate aim of supporting higher education, research and clinical practice or care, as well as of serving as a tool for the professionals working at the libraries. The platform of choice for us is NETVIBES.

To achieve greater integration and effectiveness of the services we have conducted a review of the platform and have integrated two tools that we believe will facilitate the discovery and dissemination of scientific information in our area of expertise. They are two of the social references manager with more projection: CiteUlike and Connotea As often happens in social web services, online references manager are becoming cost-effective solutions that are simple, and powerful to collect large sets of metadata resulting from scientific collaboration. These are isolated data on interest, important for every researcher, but at the collective level are an interesting solution for the discovery and evaluation of large-scale scientific content. Through social reference managers selected, Connotea and CiteUlike, the working group MILK (Medical Information Library & Knowledge) has articulated a far more effective cooperation of the participating libraries and provided a new channel to promote and facilitate the discovery of scientific information between our users.

Keywords: Medical Libraries, Web 2.0, biomedical information, interlibrary cooperation, MILK, Netvibes, social reference manager, CiteUlike, Connotea, Information discovery.

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1. Introduction

The Web 2.0 or second generation web is based primarily on user communities that foster collaboration and exchange of information, there also is talk of social web, or participatory technology in which different users with common interests related project goals to facilitate communication and cooperation between them.

Many of these technologies fall within the scope of the freeware and free software based on open source, which provides the possibility of a common use, and not subject to commercial licensing systems. Many of these tools integrate different applications that can be complemented to develop information services. One of the basic characteristics of 2.0 applications is precisely the reuse of content. Many of them are based on this principle as is the case of mashups, in Sapnish "remix" or social reference managers, whose purpose is that we have our personal library of references, as with traditional managers, but taking advantage of sharing the collective knowledge.

2. Milk Project: development stages

Although the bottom of all this lies an element that weighs more than the enabling technologies, such as the willingness to cooperate, which has been called user attitude. The draft presented here is based precisely on this aspect, where different libraries and research centres from different parts of Spain and Portugal share the interest to have a cooperative information system. The project involves the Library of Health Sciences at the Universities of Salamanca and the Autonomous University of Barcelona, Hospital de Torrevieja (Alicante), Spain and the Higher Institute of Applied Psychology (ISPA) in Lisbon, Portugal.

The starting point of this virtual project has its origin in the Summer School of the University of Salamanca "Virtual Library of Health Sciences", which will soon celebrate its 5th edition, in which members of this collaborative platform participated as speakers.

The first phase was the creation of a common information portal called "Open Medical Library", information service cooperative 2.0 that uses a free technological platform: Netvibes.

Netvibes application was developed by Tariq Krim in 2005 and is one of the pioneering tools of the Web 2.0 to offer custom desktops in the style of iGoogle, although it differs from it and from other applications and have a public part and a private part. The public one provides the information visible to users, and the private one works as an intranet, ie as a workspace and communication between members of the community of participants

Fig. 1 Public and private profile Netvibes

Netvibes brings together favorite widgets, websites, blogs, email accounts, social networks, search engines, instant messaging, RSS feeds, photos, videos, podcasts, etc. In addition Netvibes (http://www.netvibes.com) is also a global community of users. The platform is currently translated into 92 languages. Technologically uses "Universal Widget API (UWA), **is** a free widget platform that uses its structure to form a XHTML, CSS and JavaScript / Ajax. Despite the complexity of the internal technological network, one of the basic features of Netvibes is the rapid development of content and ease of use. Learning it only takes a few minutes for an average user.

Key features of Netvibes are:

Quick and smart. Starting in minutes.

Compatible. The UWA widgets are compatible with all major widget platforms (iGoogle, Windows Vista, Apple Dashboard, Live.com, iPhone, Opera, blogs, MySpace, etc.).

Simple and elegant CSS and JavaScript templates to quickly create beautiful environments.

Adaptable. Platform supporting a large number of technologies.

Visually Netvibes is organized into tabs or flaps. Each flap is an aggregator of various modules and widgets easily displaced, thanks to the AJAX language, which allows the user to organize and design the modules of his choice. Another feature is the ability to automatic update of content through RSS sources. RSS sources allow a search of specialized information and channels to serve as a continous informed warning. So when we have introduced an RSS channel about news, employment, case studies, summaries of magazines, this information is renewed, automatically incorporating the latest developments; this facilitates scientific discovery, keeping the researcher up to date.

An area known as the Health Sciences is particularly sensitive to date information and quality, so an application like Netvibes is a key competitive edge in obtaining results quickly and easily, requiring, on other hand, a minimum financial investment of time and professional dedication.

Netvibes has allowed us to share information and raise awareness of our resources in an integrated manner, since it is a multi-directional tool with enormous capabilities for the management, compilation and dissemination of information. The aim of the project Open Medical Library through MILK portal is to develop an information system, that is flexible, adaptable and driven by the community of participants to provide support to higher education, research, and clinical or care practices.

The second phase of the project was to have a shared database to facilitate us to incorporate information resources easily by all members of the community MILK, so we decided to continue using 2.0 applications such as Connotea and CiteULike, which on the one hand did not represent a financial investment on our part, and favored integration with the platform developed in Netvibes in both directions, ie be integrated into one another.

3. Integration of the platform CiteUlike MILK

CiteULike, Connotea, BibSonomy, 2collab are reference managers that pertain to the so-called "social reference managers". The fundamental value of these resources is the ability to collect information automatically and this is shared by other users with

common interests. The basic principle of these tools is the social tagging or folksonomy, literally "the classification drawn up by the people." Free social bookmarking to help store, organize, share and recommend scientific articles that a user is reading.

Of the above mentioned applications available on the market, we conducted a comprehensive evaluation of its various skills: usability, visibility and integration-adaptation to Netvibes platform. After this analysis we consider the tool that best matched our needs and goals, their versatility of information management and its many features, was CiteULike.

Citeulike, was created three years ago by Richard Cameron at the University of Manchester. It is a system open to any person subject to registration, which allows to preserve, manage and share references online of scientific and technical documents which are kept as their own but may be visible to all if they decide who incorporates them. When the researcher sees an article of interest on the web, he can add it to his personal library by pressing a button that is installed in the browser, "Post to CiteULike". The Site Manager automatically extracts the details of the bibliography. One of the features **it** offered by CiteULike is that, unlike other social markers that carry only a name and address, this collects all the metadata of the document. Incorporating references, all you have to do is to assign a user index term or label (tag). References can also be captured and integrated from accepted sources. CiteULike offers a wide range of publishers and content distributors, open and commercial ones: Ingenta, JSTOR, BioMed Central, PLoS, PubMed, Science Direct, etc.

Fig. 2 Sites compatible with CiteULike

Many of these references can also be added directly from the Bookmark that appears on their own resources, just a simple click on the logo; we proceed as explained above to

the allocation of labels and indicate, at this moment, if we wish for this article to be visible to other users, to our group or blog. The really interesting thing is that we will provide all possible access to full-text document from different suppliers, both from DOI and from any of the different packages for suppliers who have the document, so we will ensure in most cases access, regardless of the university or research center from which accessed. This issue is fundamental to our project because many of the sources of information we have collected belong to different distributors, and in each of the participating institutions the access point was different.

In this way, once incorporated, the document will be visible to all, especially to those from our group who follow us through the WatchLists or through our Neighbours, literally neighbors, ie those who use labels that we also mostly use. In this way a shared space is created, in which we can follow what researchers close to us are reading.
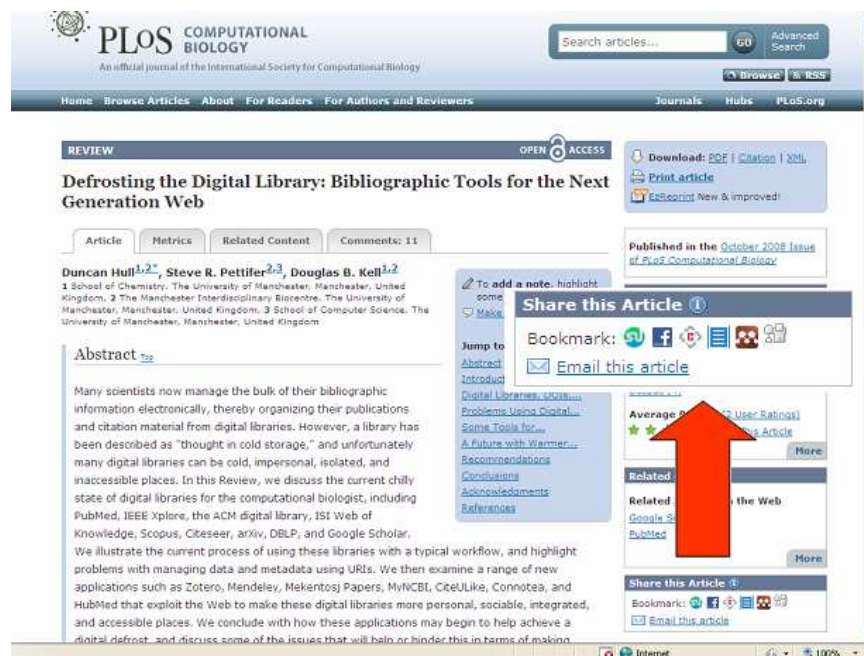

Fig. 3 CiteULike bookmarks from PLOS

CiteULike, like Netvibes, has a public space, CiteULike, and a private one, MyCiteULike, with different options and functions, and absolute permeability between a profile and the other so that we can search for documents in the public and incorporate them with the copy option to our private profile. It will always ask us to label the content based on our interests, and to indicate whether or not we want to share them. Another simple way to add a record is through the URL, ISBN, DOI or a PubMed PMID number.

Post an article from a web page
Just paste the address of an article into the box

URL

[ ] **Post it!**

This should start with *http://* (though we'll do our best if you forget). You can also enter a DOI (*doi:10.xxxx*), a PubMed ID (*pmid:nnnnnnn*), or an ISBN (*isbn:nnnnnnn*).

You can post from a vast number of online journals. Paste the URL into the box, and we'll automatically figure out enough details (title, authors, page numbers, etc) to be able to make a proper citation. If your chosen journal is not supported, please contact us and we'll be happy to consider including it.

Fig 4 Add an item from a web page

Also interesting are the features it offers for each of the records to incorporate, from the classic applications such as delete, edit, copy, put on the blog, disseminate, or export, such as different forms of access to full text, the summary , the allocation of tags which we can edit and change, and even offers a module that allows the record label to tell whether that publication is ours, what is the priority of reading from 0 to 5, add a private attachment for our personal use, incorporating a review of an article, or search for similar items by tag or user. Features that CiteULlike is upgrading, by improving and adding new ones.

Fig 5. Features a record CiteULike

Among the actions that has recently been added is the possibility of disseminating a record using the SHARE option. This application allows to forward a reference to any user that follows us, which we follow, or a group, and even spread it through Twitter.

In turn export opportunities and import from other systems of references are completely open, so that we can climb to CiteULike RIS format references have on another local or network manager, and vice versa.

CiteULike has a multi-directional character as the WatchLists continue to allow other users with similar interests to ours, see what new documents have been incorporated, and likewise those who follow us can visualize what we are reading, this will encourage the creation and development of authentic scientific social network based on cooperation and collaboration.

Interaction and Netvibes CiteULike

1. CiteULike RSS channels. Can be easily incorporated to Netvibes modules. Among the many opportunities provided by CiteULike, are: to subscribe to our new additions, to subscribe to a specific label, to a user or user group, etc. These channels can be integrated into Netvibes, so that when any member of the team to CiteULike incorporate new references will automatically appear in our universe to serve as a continuous information system and of alert to any of our MILK network users.
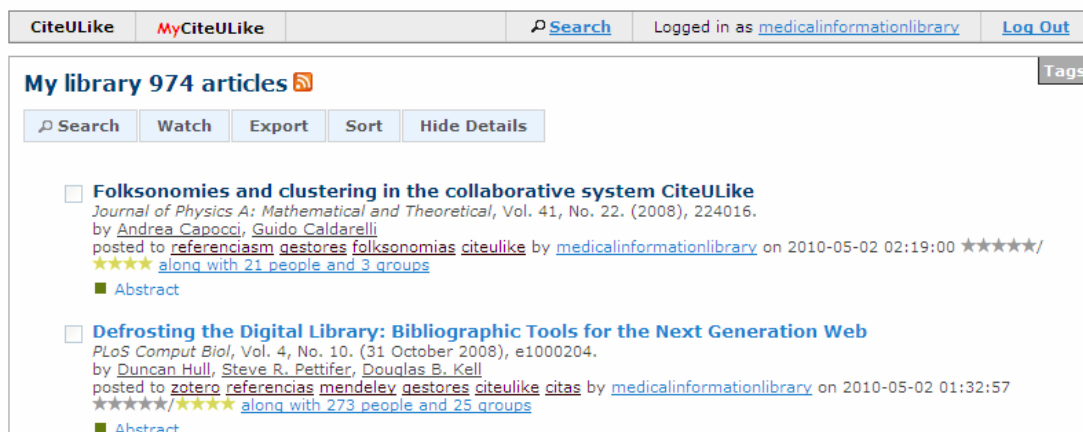
Figure 6 My Library at CiteULike

2. Integration between CiteULike and Netvibes through widgets. A widget is a small application or module that performs a specific function, usually a visual one, within other applications or operating systems. There are, at present, two widgets developing from CiteULike for Netvibes.

a. Search in CiteULike, which allows querying CiteULike

b. CiteULike compiling the latest additions to the system**.**

Fig. 7 Widget Search CiteUlike at MILK

The RSS channels that we can create and add to Netvibes, may be labels of both magazines received at our centers, and materials to facilitate the development a thematic library with an immediate warning system, cooperative and sustainable.

Fig. 8 RSS CiteUlike at MILK

Conclusions:

By incorporating and integrating these two freeware tools of Web 2.0, we have favored than any member of the organization MILK may incorporated information in a flexible way, from different locations, and that it is immediately visible on the platform Netvibes. This is a simple, flexible and agile system that allows us to work together to broaden the base of the system without imposing a significant effort on the part of each of the participating members, as the essential step is the incorporation of resources and design of the platform, and once completed this first phase, the resource update is done automatically. Thus when the source application incorporates new information, this is automatically displayed on the platform. Netvibes undoubtedly provides a good performance in terms of cost efficiency to the user community of our institutions.

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