

Wiki-based Digital Libraries Information Services in China and Abroad

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ABSTRACT

Wiki, as a new collaboration platform, provides an appropriate way for information services of digital library. This paper analyzes the features of Wiki-based integrated information services of digital library, and makes a brief introduction to its application to the development of digital libraries in China and abroad. It also points out that Wiki has played an important role in improving the work patterns in Chinese libraries, enriching Chinese library resources, and enhancing the service level of Chinese libraries. Finally, problems which should be taken into consideration in the application of Wiki to the digital libraries in China are summarized.

Keywords

digital library; Wiki; integrated information services, Chinese libraries

I INTRODUCTION

The service system of digital library is an integrated information service platform which is based on the electronic resources, the users' needs, and the advanced information technology. With the accumulation of knowledge resources, the update of the users' needs, the improvements of the information technology, as well as the introduction of new services, each service is an independent model, building in the existing service platform like the blocks. Digital library actively makes use of the integrated technologies and Library 2.0-related technology in order to achieve integrated information services and to adjust to the new method of using information in web2.0 environment. Wiki, as a key technology to Library2.0, has been put a wide use in the areas of knowledge creation and sharing of the digital library. Wiki platform is a shared platform, which emphasizing joint participation and collaboration, providing a new model for information services of the digital library.

II About Wiki

A Wiki is a type of social software that allows users to write, share and edit content real-time, with only rudimentary skills in web page creation. Anyone can edit and manage the content of Wiki, coordinate and create knowledge in collaboration with other members. The essence of Wiki consists of opening up, cooperation, equality, creating, and sharing. As a collaborative authoring platform or an open editing system, the most fundamental characteristic of Wiki is the teamwork and open editing. The teamwork means that it allows people who browse the Web to amend the website. And the open editing refers to the

permission of the open editing. The main features of Wiki include the following two areas.

A. Sharing Open and mutual cooperation

The knowledge of Wiki system is shared by community, and each member is a reader and author. Wiki community members can create, modify, and delete pages. This feature inspires the people's innovative ideas, so that the content of the page is increasingly enriched and improved. As a collaborative authoring system, Wiki requires the members of the community to have a spirit of cooperation so that they can play an active participation, joint creation of collective wisdom, and complete a task through division of labor. Because the knowledge of Wiki is collected by the whole community members, each member has the same obligations and rights to write, modify, expand, or explore about the common topics.

B. Self-organization

The structure of Wiki is self-organized, able to grow and accumulate. The knowledge base produced by Wiki is an orderly related hypertext network. Each page is named and linked to each other by these keywords. As long as a page mentions the keyword in a Wiki system, the system will automatically create links to the corresponding page. If these keywords do not exist, you can create these pages, allowing the system to expand. The organization of the hypertext can be amended, and any member can link the page to the appropriate location according to the knowledge systems. At the same time, the good convergence mechanism of Wiki can avoid duplication of links, the same content contained in the different page can be summarized in one page by changing its links, and the corresponding link structure also changes. Therefore, although the Wiki pages are created by many individuals, they are not in a mess, and people can approach the question from several perspectives and make the themes more perfect.

III Wiki and the integrated information services of digital library

The integrated information services of digital library aim to be user-oriented, but the present design and implementation of the services are librarian-oriented, and lack of the user's participation and interaction is common, affecting the integrated services. Wiki gives a strong support to achieve the integrated information services, because it breaks the time and space constraints, and sets up a communication channel between librarians and readers. It fully embodies the user-oriented concept, and meets the need of the digital library. The integrated information services based on Wiki present the following characteristics.

A. Interactive services

The reader's participation is the key to the success of the integrated services, because reader is a recipient and a partner of services. In Wiki, the reader does not just receive the services, but also offers the requests and suggestions to the librarians. The librarians can answer the reader's question in time through the Wiki platform, and find problems at work and improve the services. The interactive services not only meet the information needs of readers, but also stimulate the reader's initiative, improve the reader's awareness of the information and ability to utilize the library. The Wiki platform not only promotes knowledge sharing and encourages service innovation, but also contributes to the communication and cooperation between the librarians and readers.

B. "Public participating" consultative services

In traditional reference services, librarians answer the readers' questions. This model provides readers with a professional reference, but is more vulnerable to limitations of the librarians' knowledge and the reference knowledge base in library. But the Wiki encourages non-professional cooperation, and its accumulation of knowledge and self-organization make it very suitable for building a digital reference system. In Wiki-based digital reference system, there is no longer two-point model as the one in traditional reference services. Instead all can read the questions raised by readers, and participate by asking questions and amendments to make a leap in the library reference work. The Wiki-based consultative service encourages users to participate the construction of library resource, which meet readers' needs largely. At the same time, it expands the reference information sources of library and makes librarians answer the question the reader consult more comprehensive, accurate and authoritative. In a word, the timely, efficient, shared natures of Wiki make better to meet users' need.

IV Wiki application status quo in digital library in China

Open World Cat a union catalog founded by OCLC [1] in October 2005, has the greatest impact in the library community. It sets up a new model to create, accumulate, improve and share knowledge for the library. At the same time, it also bridges the communication and cooperation between the users. Meredith Farkas, the founder of Library Success, points out that the potential of applying Wiki in Library is unlimited, and at least they are the fast and easy collaboration space. From a deep level, they can become real community resource and make the library become the online network center of community [2].

A. Domestic status quo in china

The domestic concerns on Wiki began from the English Wikipedia. In October 2002, Chinese Wikipedia opened. Then the domestic library community accepted the Wiki slowly and applied Wiki to improve and innovate information service gradually, the main Application are as follows.

- Library Internal Wiki. Librarian Wiki is an intranet only belonging to the librarians, which is built and maintained by all the librarians together. Any librarian can record his experience and thoughts in the daily work, including the newly discovered information resources, the latest news in expertise area, the skills of user communications, effective

retrieval methods and some new knack and so on. At the same time, librarians can also post their problems or questions which they come across in the work and the others can express their views on this issue for so as to solve the problems and promote the communication between them. The content is organized by topic, so those in the same subject will be accumulated to form a retrospective of knowledge. This treasure collects the wisdom of all the libraries, and is shared, maintained and updated by all of them so that the contents of the knowledge base are constantly enriched and improved. Xiamen University Library Wiki [3] which is the first Wiki Application in china is used for librarian communication. The Wiki listed the regulations, workload statistics and questions of the cataloging department about the Library, achieving the dynamic maintenance of rules and regulations. The Wiki also provides catalog index about blogs, aggregates a large number of experts' blogs in library science, helping readers acquire the latest information about the libraries at home and abroad. Later the library of Shandong Institute of Business has created a "librarian Wiki".

- Academic Wiki. The establishment of Shanghai University academic Wiki [4] is based on the famous MEDIAWIKI, using PHP and MYSQL framework. The academic Wiki is led by Subject Librarian (mostly teacher and postgraduate), and organizing the valuable Information sort by subject category, finally come into being an encyclopedia on subject knowledge. The uses can divide into three levels: (1) Subject librarian and academic authority. They have the highest privileges about their subjects and can edit and restore any entry. (2) Subject group members. They have limited access on their subject; and they can edit the entry in dynamic discussion except the certain one. But they can put forward their own views on certain entry, the higher authority members may carry out modification after confirming. In addition, they are responsible for monitoring some knowledge entry about which they have the highest authority. (3) The viewers and users. Generally speaking, they only have the access to browse the academic knowledge, but when they think there is something wrong with knowledge entry, they can feed back their opinion to the second level principal who is responsible for monitoring these knowledge entry and confirm changes. The Wiki also set up OPAC, which provide channels of communication for librarians and users. The research group of OPAC also explored the OPAC rehabilitation program on how to adapt to the needs of users to retrieve through Wiki.
- Wiki Other Wiki Application. "Guan hai ting tao Wiki [5]" established by Harbin Institute of Technology, set a sub-item for the library. There are two sections including Library learning and library resources, which are linked to the library, library home page and message boards of Lilac BBS Station. Conferences Wiki: Documentation and Information Center of the Chinese Academy of Science hold a seminar by the first time to use Wiki to expand the theme and share the meeting content, greatly promoted the effect and value of the traditional conference.

In addition, there are some Wiki applications about research project. Xu Ping who comes from Shanghai University of Traditional Chinese Medicine, acupuncture and Massage College, his "acupuncture research and instructions" is the first to use Wiki

for national research project and co-creation with students and teachers. Later Chinese Academy of Sciences National Science Digital Library also used Wiki as a research project platform for creating and sharing information.

B. Analysis of Wiki applications in library information services in China and abroad

Chinese Wiki application is not as widespread as overseas. Wiki is very famous communication platform abroad. In 2004, the people in the library and information area abroad began to discuss the possibility of Wiki applications. In 2005, the Wiki in some library and information area was established, such as the Library Success [6], Library and Information Science Wiki [7], as well as Library technology training Wiki [8]. They provided some professional information about library job, technology and management for scholars to study, offered a platform to communication. With the opening of OWC, Wiki has been widely used in a lot of digital libraries abroad [9].

There are some successful Wiki applications like that in China such as the establishment and completion of union catalog, library internal business communication and management and library common services. The successful Library internal Wiki examples include staff Wiki in the University of Connecticut Libraries [10], Antioch College Library staff training base in England, Library Instruction Wiki created by Oregon library, librarians Wiki in Binghamton University, as well as the librarians' internal network in the University of Minnesota [11] and so on.

Besides this, there are other applications abroad like reference Wiki and Subject guide Wiki, etc. Reference Wiki encourage readers and librarians to mutual cooperate and mobilize users to participate in library information services construction [11]. In 2005, the US Butler University Library established a "Reference Wiki"[13]. The Wiki platform makes the information communication between librarians and readers achieve a higher level, attract public participation. Subject guide Wiki, which organized by subject, help users understand subject information, search the library resources and share interested topic reading. Librarians and users can add content freely and maintain the links updated in one subject guide Wiki. The typical examples are the US San Jose Public Library Subject Guides and Ohio University Libraries Biz Wiki [14].

In 2007, Bejune [15] made a statistical analysis of the wikis applied to foreign libraries. He divided the Wiki application into four categories: (1) collaboration among libraries; (2) collaboration among library staff; (3) collaboration among library staff and patrons; and (4) collaboration among patrons. Among the thirty-three foreign library wikis, the first category accounts for 45.7%, the second 31.4%, the third 14.3%, and the fourth only 8.6%. Nearly eighty percent of all of the applications belong to the first and second categories, and so are the Wiki applications in China. The user-oriented Wikis haven't emerged in China.

The application of Wiki in foreign libraries has been relatively mature, while domestic application is only in its infancy. But as the information of the domestic digital library is greatly improved, the domestic digital libraries already have been able to utilize Wiki. We can summarize and absorb the practical experience of the foreign libraries. At the same time, we should be fully aware

of the role of the Wiki and speed up the process of Wiki applications. We can improve the working methods by utilizing Wiki, enrich the library resources and enhance library services.

Overall, Wiki has been applied in the library community, but there is a shortage in the application between libraries and readers, which is the bottleneck of the application in the library field. As a new technology, Wiki often produce negative effects of insecurity, and thus Wiki grants the readers a limited right. In general, Wiki should be firstly utilized in libraries, and the cooperation and communication of librarians. With the advance of technology and the development of people's morals, all the reader will get access to Wiki. The communication between librarians and reader will be the focus of the Wiki development, because only when Wiki is applied to the readers will there be a progress in libraries.

V Proposals on the Wiki-based information services platform of digital library in China

As for the Wiki-based information services platform of digital library in China, the following questions should be dealt with carefully.

First of all, the Wiki technology is applied to the digital library with an intention to improve the library's work and to promote digital library services in better play. Therefore, how to make services and technologies "seamless fit" is a priority to build a Wiki. This requires a clear, broad-based positioning. University Digital Library Wiki system is intended to students, experts and teachers who build the knowledge base, as well as the library staff. They have a strong demand for the integrity and convenience of the system, and the necessary functional need for customization. These features can not be found in the free open-source and need the redevelopment by the free open-source.

Second, the permissions issue. Theoretically speaking, as Wiki is an open editing system, each reader has the right to modify, add and delete contents. But some readers are different in the background knowledge, and even intentionally sabotage the original knowledge. Therefore, in order to ensure the accuracy and security of the modified entries, it is necessary to establish the protection mechanisms and set editing rules, such as setting a lock on the correct and key page, retain the changed version, comparing different versions, prohibiting spoilers' IP, sand box testing, update the description and so on. These mechanisms and rules should not only adhere to the principles of open participation for the general public, but also minimize the risks of a number of participants, so as to reflect the spirit of Wiki---open, freedom and cooperation.

The third is the conflict solving. In the Wiki platform, each person has the right to edit the entries so that editing articles is very prone to conflicts. There are data conflicts and man-made conflicts. The most common reason for data conflicts is the time is too close between editing and submitting. Therefore we encourage users to adjust their editing and submission of time, or inherit the current valid information. As for the man-made conflicts, starting from the user's point of view, we advocate the editors to write in a neutral and objective way, to respect the fruits of labor of the creator, and to approach the different views fairly.

Finally, it is about the user's participation. Wiki technology itself does not promote collaboration, communication and knowledge

creation, but provides a platform for collaboration. In this sense, the reason why people are urged to use Wiki is that Wiki is more a technology than a concept. Wiki is an open communication platform, and the key is whether the users are willing to put their question on the Wiki. How to take effective measures to enable librarians and readers willing to share in the Wiki, and share their knowledge, experience, and how to turn the individual knowledge into collective knowledge, need the further consideration. Therefore, the library should take measures to gather user loyalty, change from passive to active, encourage users' passion to participate are the key to build the whole platform.

In short, many problems will arise in the process of the Wiki application process. However, it can greatly improve the quality of library service, and expand the disciplines. Therefore, the university library should be centered on serving users, continuously improve their service level, and only when the new technologies are used in services, will the library become the core of the construction of university disciplines.

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