Creating Library Website Using Open Source Content Management System

Vimal kumar V.[1] and Deepak Sankar [2]

[1] Asian School of Business
Technopark
Trivandrum-695 581
Vimal0212@yahoo.com

[2] Deepak Shankar
Malayalam Communications Limited
Thiruvananthapuram - 695 023
deeyese@gmail.com

Abstract. Library website is considered as communication tool, which help to create and publish the information regarding its activities and services. Creation and maintenance of an interactive library website consumes technical expertise, money and time. And maintenance of library website in traditional way also creates problems for library staff with little technical expertise. Content management systems (CMS) are computer software systems for organizing, displaying and facilitating collaborative creation of content. They consist of readymade functions and modules for manage and organize website content. Using content management system library professionals can create and update the website concentrate on the content and do not have to care about the layout. This paper checks the scope of

content management system for the building of library website.

1 Introduction

Online publication has now become easy than before with the advent of Information and Communication Technology (ICT), especially with the popular use of World Wide Web. Information and Communication Technology also persuade to change the way of information professional's work. Library websites are becoming the place for content creation and publication. Major libraries are setting up their website as portal for all services and using as a marketing tool to attract users. Library users value timely dissemination of information about library activities and services through library websites. Creation and maintenance of dynamic website content makes an enormous challenge before information professionals and library authorities, it needs money and professional manpower. Compared with the traditional website development, open source content management systems are truly feasible in terms of functionality, cost and maintenance.

2 Issues related to the development of library websites

The library website can be used as a platform for a number of activities. It can act as a bulletin of the various events the library organizes, the host of services

it offers to its patrons, an interactive catalogue-say of the books collection, a periodical list of additions, an array of pointers to other useful sites, etc (Sreekumar, 2006).Library websites contents must be dynamic in nature. Constant updates of website content are required to report about ongoing library activities. Without a user friendly interface for content upload to traditional website prevent constant updates in the content. Content creators either have knowledge of HTML tags or need the help from website administrator to publish the content on time. Karen A. Coombs, Head of Web Services, University of Houston (UH) Libraries explains the reasons that reshaped their library website to more dynamic in nature: "all content was passed through the Web services department before becoming part of the site. As a result, making updates was a time-consuming task and significant portions of the site were out-of-date. In addition, the site's structure was rigid and inflexible and provided no space for staff or users to participate. An informal needs assessment revealed that staff members wanted to control their own content and to have a way to make the site more engaging and interesting to their users"(Coombs, 2007). New generation website development gives more importance to interactivity with users. Following facility makes the website content more dynamic, user centered and Web 2.0 compliant:

- Blogs
- RSS feeds
- Discussion forum

- Surveys
- Wikis
- Podcasts etc.

Development of an interactive and web 2.0 featured website development requires more time, technical expertise and investment of money. Static websites have no facility to encourage collaborative content development. An ideal new generation library website does the following (Cohen, 2006):

- Users participate in creating resource lists in the subject areas of their research.
- Users contribute to research tips created by instruction of reference librarians.
- Users add to technical instructions for such activities as off-campus access, use of EndNote, using the library's printers, tips on working with workstation software, etc.
- Users comment on library services using the blogs linked to the pages of major services, e.g., reference, interlibrary loan, circulation, reserves, online catalog, Web site, general technology, physical plant, etc.

A Web site with this type of configuration - based on both wikis and blogs - would be far different from the typical sites that libraries maintain.

3 Open Source Content Management System

A content management system (CMS) is a computer software system used to assist its users in the process of content management. A CMS facilitates the organization, control and publication of a large body of documents and other content, such as images and multimedia resources. A CMS often facilitates the collaborative creation of documents. A web content management system is a content management system with additional features to ease the tasks required to publish web content to Web sites (Wikipedia, 2007). Content management systems are extensively used to build websites, portals and intranets in business, educational, and non-profit organizations. The following benefits are available with content management systems :(Okes, 2006)

- Create and publish content in a standard format without needing to know HTML or other languages;
- Co-ordinate the work of teams of authors and editors (e.g. by ensuring that only one person is editing any individual content item at any one time);
- Control the branding and quality of content (e.g. by ensuring that the correct style sheets are applied, and that changes to the content are approved before they are published);
- Reuse the same content item in multiple different sites and formats.

Open source content management systems are the result of open source software movement. It conceptualized the open source values and principles in the development of content management system. Open source software provides a new feeling of optimism among users and software developers about free use and exchange of software. It encourages user's freedom to run, copy, distribute, study, change and improve the software. The freedom to use a program means the freedom for any kind of person or organization to use it on any kind of computer system, for any kind of overall job, and without being required to communicate subsequently with the developer or any other specific entity (Free Software Foundation, 2005). Open source software model ensures community participation in software development at most important for the general well-being of our society. Most of the open source content management systems are available free of cost and can compete with commercial alternatives.

4 Scope of Content Management System in Library Website development

Updates or creation of the content by editing HTML tags expects some knowledge of markup and CGI scripting language. Errors on HTML tags occurred at the time of updating the webpage may distort the content of webpage. User friendly interface can ensure accuracy and save time lag between content creation and publication. Information professionals without

technical know-how necessitate a user friendly interface to push the information content on library website. Content Management Systems provide web based user interface to upload the information on website. Content creators can easily manage and deploy text, audio, video and other types of documents in digital format (PDF, RTF, ppt, doc, etc) with the help of simple content upload interface. In addition content management systems give simultaneous access for content developers from various locations. This feature is helpful in the case of libraries with branches or departments active in different activities. Content Management Systems help information professionals to manage website content concentrating its accuracy and value without thinking about technical aspects.

5 Selection, installation and maintenance of content management system

Selection from over 100 open source content management system is a complex process. Choosing a content management system is now about checking the features that each offer against what you want to do, and picking the one that provides the best fit (Oake, 2006). Open source content management system can download freely from software websites and this enables the users to try the software before implement in the working environment.

Content management systems use various programming and technology such as PHP, ASP, PERL, Python and Java. Databases supporting are MySQL, Postgre and Oracle with Windows or Linux. Most popular content management systems developed on PHP-MySQL-Windows/Linux platform. PHP is a popular open-source programming language used for developing server-side applications and dynamic web content. Configuration and installation of PHP based content management systems requires only minimum technical knowledge. Popular PHP-MySQL based content management systems are,

- Joomla
- Mambo
- phpNuke
- PostNuke
- Drupal
- TYPO3

All these open source content management systems are powerful, multifunctional and can be used to develop websites, intranet and portals. In addition, a range of extra modules and functional components with user friendly control panel are available with them. Community based software projects of the open source content management system ensures strong user support and active development status.

A content management system runs on the platform of web server (eg. Apache) and content stored in a relational database system (eg. MySQL). Administration and public interface for users are the two available interfaces of a content management system. Both interfaces can be access through a web browser.
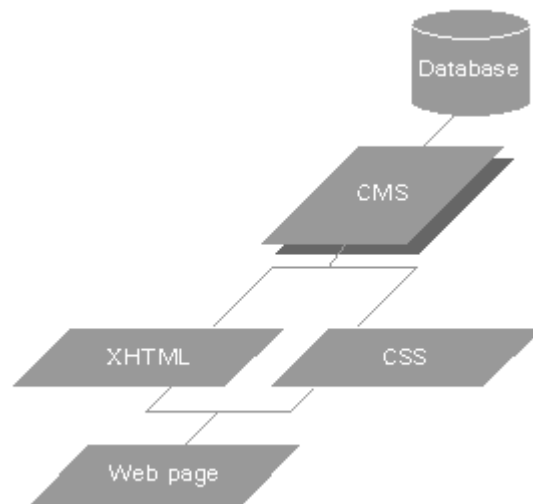
Figure.1 Structure of a content management system

Installation of content management system alone does not make the system ready to use. After installation of content management system, new design to site and creation of forms and workflows for content entry is necessary. Customization of the existing design of content management system is good to keep the brand design of library. This can be done by editing CSS (Cascading style sheet) base graphics templates. Definition of work flows and forms suitable for the needs of library is a pre-requisite for content input and publication by writers and editors of website.

Administrators and content creators are the persons responsible for making the content management system live in an organization. Administrator of content management system is responsible for maintenance, customization, creating user accounts and privileges. Content creators submit the content to the system and the administrator accepts or rejects the document. The accepted content is published through the content management system and users can view the content in website.

Content management systems are not free from disadvantages. Content management systems require initial investment on technical help and dedicated server. Technical help is critical to personalize the graphical design and workflow generation. Content management system is effective in an environment where regular update of website content.

6 Conclusions

The technologies exist to make library sites a joint venture, in which librarians and their constituencies work together to create an online presence that hears voices from both sides of the fence. In a way, this type of site would remove most of the fence (Kohen, 2006). Open source content management systems are most convenient and cheaper solutions to build functional library websites. Most care and concern must be given while selecting an open source content management system suitable for your organizational requirements to develop a website. The main advantage of content management system over traditional website development is that, it ensures seamless website content input and updating making use collaboration.

References

[1] Sreekumar, M.G., (2006). Library Marketing in the New Information Environment: Ways and Means. *KELPRO Bulletin*, 60-68.

[2] Coombs, Karen A. (January 2007). Building a Library Web Site on the Pillars of Web 2.0. *Information Today,* www.infotoday.com

[3] Cohen, Laura, (2006). The Ideal Library 2.0 Academic Library Web Site. *Library 2.0,* http://liblogs.albany.edu/library20/2006/10/

[4] Content Management System, (2007). *Wikipedia,* http://en.wikipedia.org/wiki/Content_management_system

[5] Oakes, Graham (2006). Introduction to Content Management Systems. *Free Software Magazine*, *13*, www.freesoftwaremagazine.com/articles/cms_intro

[6] The Free Software Definition, (2005). Free Software Foundation, www.fsf.org/licensing/essays/free-sw.html

[7] Oakes, Graham (2006). Creating a managed website, *Free Software Magazine*, *14*, www.freesoftwaremagazine.com/articles/cms_end_users_part_1

[8] Cohen, Laura, (2006). The Ideal Library 2.0 Academic Library Web Site. *Library 2.0,* http://liblogs.albany.edu/library20/2006/10/