

Need for Web 2.0 Technology for the Libraries

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Abstract

The latest buzzword in the Internet world is 'Web 2.0'. It was enabled by the emergence of platforms such as blogging, social networks, free image & video uploading, etc that collectively allowed easy content creation and sharing by everyone. Altogether, Web 2.0 delivers a rich user experience. This paper deals with Web 2.0 features, characteristics, applications, benefits and paradigms observed by its implementation in libraries.

Keywords: Web 2.0, Library 2.0, Blog, Wikis, RSS, Tagging, Podcasting, Instant Messaging

1. Introduction

“Web 2.0” describes the changing trends in the use of World Wide Web technology and web design that aim to enhance creativity, communications, secure information sharing, collaboration and functionality of the web. Web 2.0 concepts have led to the development and evolution of web culture communities and hosted services, such as social-networking sites, video sharing sites, wikis, blogs, and folksonomies.

The term ‘Web 2.0’ was coined by technology commentator Tim O’Reilly who tried to define it as follows: “Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an

‘architecture of participation’ and going beyond the page metaphor of Web 1.0 to deliver rich user experiences” (O’Reilly, 2005) ⁽¹⁾.

2. Features of Web 2.0

Web 2.0 websites typically include some of the following features/techniques that Andrew McAfee used the acronym SLATES to refer to them ⁽³⁾:

2.1 **Search:** the ease of finding information through keyword search which makes the platform valuable.

2.2 **Links:** guides to important pieces of information. The best pages are the most frequently linked to.

2.3 **Authoring:** the ability to create constantly updating content over a platform that is shifted from being the creation of a few to being the constantly updated, interlinked work. In Wikis, the content is iterative in the sense that the people undo and redo each other’s work. In blogs, content is cumulative in that posts and comments of individuals are accumulated over time.



2.4 **Tags:** categorization of content by creating tags that are simple, one-word descriptions to facilitate searching and avoid rigid, pre-made categories.

2.5 **Extensions:** automation of some of the work and pattern matching by using algorithms e.g. amazon.com recommendations.

2.6 **Signals:** the use of RSS (Really Simple Syndication) technology to notify users with any changes of the content by sending e-mails to them.”

3. Web 2.0 Characteristics

The following web 2.0 characteristics take the common technologies together and describe well what is new about them ⁽⁴⁾.

Participation: Every aspect of Web 2.0 is driven by participation. The transition to Web 2.0 was enabled by the emergence of platforms such as blogging, social networks, and free image and video uploading, that collectively allowed extremely easy content creation and sharing by anyone. Participatory architecture is an

architecture where user can add or edit value to the application according to their requirement. Contrary to the traditional web which was somewhat one-sided, with a flow of content from the provider to viewer, Web2.0 allows the users to actively participate online.

Standards: Standards provide an essential platform for Web 2.0. Common interfaces for accessing content and applications are the glue that allows integration across the many elements of the emergent web.

Decentralization: Web 2.0 is decentralized in its architecture, participation, and usage. Power and flexibility emerges from distributing applications and content over many computers and systems, rather than maintaining them on centralized systems. It is about communication and facilitating community.

Openness: The world of Web 2.0 has only become possible through a spirit of openness whereby developers and companies provide open, transparent access to their applications and content.

Modularity: Web 2.0 is the antithesis of the monolithic. It emerges from many, many components or modules that are designed to link and integrate with others, together building a whole that is greater than the sum of its parts. Users are able to pick and choose from a set of interoperating components in order to build something that meets their needs.

User Control: A primary direction of Web 2.0 is for users to control the content they create, the data captured about their web activities, and their identity. This powerful trend is driven by the clear desires of participants.

Identity: Identity is a critical element of both Web 2.0 and the future direction of the internet. We can increasingly choose to represent our identities however we please, across interactions, virtual worlds, and social networks. We can also own and verify our real identities in transactions if we choose.

4. Web 2.0 technologies and its implementation for the libraries

Web 2.0 encompasses several technologies and services, viz

4.1 Blogs: It is a powerful two-way based tool. A blog is a website where library users can enter their

thoughts, ideas, suggestions, and comments. Blogs entries known as blog posts are made in journal style and are usually displayed in reverse chronological order; entries listed in specific categories that can be searched; links to other sites of interest and places for comments; and a monthly archive of previous entries. A blog entry might contain text, images or links to other blogs and web pages. Any library user can publish a blog post easily and cheaply through a web interface, and any reader can place a comment on a blog post.

Applications

- ◆ Blogs serve as a platform where the users can file their concerns, queries and suggestions regarding the services and activities of the library,
- ◆ Blogs can also be used for the collection development where the users request the resources,
- ◆ Blogs can be used tools for marketing of the information as well as the library,
- ◆ Can be used as tool for posting Minutes of the Meetings for necessary actions,
- ◆ Blogs can serve as discussion forum.

Examples

Latvian Librarian Blogs

- ◆ http://bibliotekari.blogspot.com/2007_09_01_archive.html
- ◆ <http://www.b20.lv/2007/10/19/publiskots-latvijas-biblioteku-portals/>
- ◆ <http://bibliotekari.blogspot.com/>
- ◆ All about Latvia
- ◆ <http://www.allaboutlatvia.com/>

4.2 Wikis: A wiki is a webpage or set of WebPages that can be easily edited by anyone who

is allowed access (Ebersbach et al., 2006). Wikipedia's popular success has meant that the concept of the wiki, as a collaborative tool that facilitates the production of a group work, is widely understood. Wiki pages have an edit button displayed on the screen and the user can click on this to access an easy-to-use online editing tool to change or even delete the contents of the page in question. Simple, hypertext-style linking between pages is used to create a navigable set of pages.

Unlike blogs, wikis generally have a history function, which allows previous versions to be examined, and a rollback function, which restores previous versions.

Applications

- ◆ Wikis can be used for social interaction and discussions among the librarians & users as well.
- ◆ Wikis can also be used by the users to share information and enhance the content, and a record of these transactions is archived for future reference.
- ◆ Reference resources wiki can be built.
- ◆ Wikis can be used for creating subject guides, subject gateways.

Examples-

LIS Wiki :http://liswiki.org/wiki/Main_Pag0065

Library Wikis : <http://librarywikis.pbwiki.com/>

4.3 Really Simple Syndication (RSS): RSS is a family of web feed format used for syndicating content from blogs or web pages, RSS uses an XML that summarizes information items and links to the information sources. It informs users of updates

to blogs or websites, which are interested by the users. Many web browsers have built-in-feed readers or aggregators, and can easily add feeds to web page.

Applications

- ◆ Announcement of the availability of new books and other resources in a given subject area.
- ◆ Librarians can subscribe to RSS from the sources for compiling their customized alerts.
- ◆ Promote events organized in the library for Library Users.
- ◆ Enhance Library Instruction for different Web 2.0, Library 2.0, Blogs, Wikis, RSS, Tagging, Podcasting, IM programs/courses by integrating appropriate resources.
- ◆ Announce availability of new research and learning opportunities in various academic/ research departments.
- ◆ Integrating library services through RSS feeds.

Examples

Edmonton Public Library <http://www.epl.ca/RSSFeeds/EPLRSSFeeds.cfm>

Hennepin County Library <http://www.hclib.org/pub/search/RSS.cfm>

4.4 Instant Messaging (IM): IM is a form of real-time communication between two or more people based on typed text, images etc. IM has become increasingly popular due to its quick response time, its ease of use, and possibility of multitasking. It is estimated that there are several millions of IM users, using for various purposes viz: simple requests and responses, scheduling face to face meetings, or just to check the availability of colleagues and friends.

Applications

- ◆ Instant clarifications for the Questions from users and vice versa.
- ◆ Online meetings
- ◆ For providing virtual reference services.

Examples

Saint Joseph Public Library : <http://www.libraryforlife.org/asksjcpl/asksjcpl.html>

Question Point/ Ask a Librarian : http://www.spl.org/default.asp?pageID=info_ask

4.5 Social Networking: Social networks are built upon a hypothesis that there exists a determinable networking structure of how people know each other. A social network thus can be formalized into a net structure comprising nodes and edges. Nodes represent individuals or organizations. Edges connecting nodes are called ties, which represent the relationships between the individuals and organizations.

Myspace and FaceBook are two popular social networking sites launched during 2003 and 2004 respectively. Myspace allows organizations to create their own profiles, pages and can be used by libraries. But Facebook allows individual librarians to create profiles.

Applications

- ◆ Libraries can create a page to reach to new users
- ◆ Social networking could enable librarians and patrons not only to interact, but to share and change resources dynamically in an electronic medium.
- ◆ For building network among the interested group in discussing the common interest

- ◆ User content can be added to the library catalogue, including users book reviews or other comments

Examples

Bryant University Library : <http://www.facebook.com/pages/Smithfield-RI/Bryant-University-Library/#/pages/Smithfield-RI/Bryant-University-Library/42442031994?ref=ts>

Brooklyn College Library : <http://www.myspace.com/brooklyncollegelibrary>

4.6 Podcasting: A podcast is a series of audio or video digital-media files which is distributed over the Internet by syndicated download, through Web feeds, to portable media players and personal computers. Though the same content may also be made available by direct download or streaming, a podcast is distinguished from other digital-media formats by its ability to be syndicated, subscribed to, and downloaded automatically when new content is added.

Applications

- ◆ Podcasts promotional recordings about the library's services and programs.
- ◆ Podcast highlights about new resources
- ◆ Podcasts enable librarians to share information with anyone at any time.
- ◆ Podcasting can be a publishing tool for users and librarians' oral presentations.

Example

Worthington Libraries : <http://www.worthingtonlibraries.org/programs2go/>

Denver Library : <http://podcast.denverlibrary.org/>

4.7 Tagging: A tag is a keyword that is added to a digital object (e.g. a website, picture or video

clip) to describe it, but not as part of a formal classification system. The concept of tagging has been widened far beyond website bookmarking, and services like Flickr (Photos), YouTube (video) and Audio (podcasts) allow a variety of digital artifacts to be socially tagged.

Applications

- ◆ Tagging can be applied to the LMS for editing the subject headings from the user point of view and there by enhancing the indexing and relevancy of the searches, making the collection more dynamic.
- ◆ Tagging would greatly facilitate the lateral searching.

Examples

LibraryThingwww.librarything.com : <http://www.librarything.com/work/660415>

University of Pennsylvania : <http://tags.library.upenn.edu/>

5. Benefits of Web 2.0

Following are the benefits observed by implementing Web 2.0⁽⁶⁾:

- ◆ **Faster time to market-** The information environment within which libraries are functioning today is changing faster than ever before. Library 2.0 is a concept of a library service intended towards meeting the needs and expectations of library users faster through its tools such as RSS, Blogs, Social networks etc. Libraries are required to go beyond the needs, wants, and demands of their customers and should try to fulfill them by anticipating them as far as possible

- ◆ **Closer relationship with customers-** Library 2.0 is a user-centered virtual community. Users interact with one another and with the librarians and create more & more content in less time. User participation in the library activities builds a relationship with the users of the library. Relationship is built during the information flow from the user back to the library like comments and questions on library blogs, users uploading their own historical photos to Flickr to create community photo archives and allowing users to review and rate books in the library's catalogue.
- ◆ **Increased responsiveness-** Increased responses are because publishing is easy; so you can focus on content delivery. You can create, update, and publish information on a blog from any computer that's connected to the Internet. Weblog encourages readers to comment. The content can be entered in plain text –and design templates are available. There is no need to have special servers or software installed on your computer.

6. Paradigm

Web 2.0 not only means new technologies, it also brings about a fundamental change in how libraries operate. The main characteristic of this new order is that information management and provision are no longer under the purview of the librarian. The best thing is participative cataloguing through social tagging. Web 2.0 technologies offer diverse ways to add value to library services. Librarians and users recognize tools such as blogs, wikis, RSS feeds as facilitating communication. RSS is also a great way to encourage staff to keep up with professional reading. Following paradigm shifts are observed by the implementing web 2.0 in libraries:

- ◆ User-centricism is neither new nor special to Library 2.0 but user-participation is new and special.
- ◆ Not only the terminology shift from Library to Library 2.0 but there is a shift in tools & techniques used to deliver the information services.
- ◆ Shift is observed in reaching out the larger user community.
- ◆ There is a certain paradigm in the speed of the updated information and its reach out.
- ◆ Paradigm shift is observed in social tagging where everyone is allowed to categorize the information from the user's perspective.
- ◆ Paradigm shift is observed in automation of open access to information.
- ◆ Copyright will no longer exist because it will be replaced by clickable licenses among communities.
- ◆ Individual access converts to community access.

7. Conclusion

Web 2.0 technologies have been adopted by the group of libraries to recalibrate the processes and the paradigms of the library and information services. This new model is all about the amalgamation of the various tools and technologies of the web 2.0 into the library services. Web 2.0 is not just a technology or a thing but a new paradigm and a state of mind. The heart of Library 2.0 is user-centered change. It is model that encourages constant and purposeful change, inviting user participation. The library has had a web-presence for many years, and with Library 2.0, its patrons will be joining it. There is a certain need for implantation of Web 2.0 technologies in libraries.

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