

## Towards Library 2.0: Designing and Implementing the Modern Library Service

Parthasarathi Mukhopadhyay

Subarna K Das

### Abstract

*Library 2.0 is a loosely defined model for a modernized form of library service that reflects a transition within the library world in the way that services are delivered to users. The focus is on user-centered change and participation in the creation of content and community. The concept of Library 2.0 borrows from that of Business 2.0 and Web 2.0 and follows some of the same underlying philosophies. This includes online services such as the use of OPAC systems and an increased flow of information from the user back to the library. With Library 2.0, library services are constantly updated and reevaluated to best serve library users. Library 2.0 also attempts to harness the library user in the design and implementation of library services by encouraging feedback and participation. Proponents of this concept expect that ultimately the Library 2.0 model for service will replace traditional, one-directional service offerings that have characterized libraries for centuries. Present paper highlights the changing role of library 2.0 in present digital environment.*

**Keywords:** Library, Library 2.0, Business 2.0, Web 2.0, OPAC

### 1. Introduction

"Web 2.0 is based on wisdom of crowds" (Stephen Abram, 2007)

The concept of Library 2.0 is originated in "biblioblogosphere" (weblogs dedicated to the issues related with library and librarians) and gaining maturity in Web based publication media. Traditional scholarly publication channels of our field have not yet addressed the concept and implications of it. In simple words, Library 2.0 is the application of Web 2.0 thinking and technologies to library services and collections. Therefore, it is essential to discuss Web 2.0 and its related principles before making a quantum jump into the core of Library 2.0 theory and its practical application.

### 2. The Rise of Web 2.0

"Web 2.0 is an attitude not a technology" (Ian Davis, 2005).

Web presently allows little scope for user interaction and participation. As reported by Tim O'Reilly (2005a), a pioneer in Web 2.0 theory, the concept of "Web 2.0" began with a conference brainstorming session on interactive user-driven Web, organized by O'Reilly and MediaLive International in 2005. Within a year, Web 2.0 became a buzzword with more than 10 million citations in Google. Some people are excoriating it as a hollow marketing hype, and others are accepting it as the expansion of the present form of Web. The concept of Web 2.0 was crystallized from the process of measuring

the reasons for success of some Internet companies in comparison with their competitors (O'Reilly, 2005b). A list of the concepts, methods, and technologies were identified as core causes of success. These were termed as Web 2.0 and formed the base of original definition of the concept. This list (as given in Table 1) clearly illustrates the shifting of focus.

<b>Web 1.0</b>		<b>Web 2.0</b>
DoubleClick	⇒	Google AdSense
Ofoto	⇒	Flickr
Akamai	⇒	BitTorrent
Mp3.com	⇒	Napster
Britannica Online	⇒	Wikipedia
Publishing	⇒	Participation
Content management systems	⇒	Wikis
Directories (taxonomy)	⇒	Tagging ("folksonomy")
Stickiness	⇒	Syndication

**Table 1: Shift of Technological Focus**

However, Tim O'Reilly (2005a) posted a more compact definition of Web 2.0 in blogosphere, which attracted attention of bloggers working in this area -

"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. "

On the basis of the definition, given above, Radfar (2005) identified following characteristics of Web 2.0 –

- ◆ A platform enabling the utilization of distributed services;
- ◆ A phenomenon describing the transformation of the web from a publication medium to a platform for distributed services; and
- ◆ A technology, service, meme, or entity that leverages, contributes, or describes the transformation of the web into a platform for services.

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The present Web (often referred as Web 1.0 in blogosphere) is therefore progressing towards a User-centred entity with the support of an advanced set of technological tools that are collaborative, interactive and dynamic in nature. Interestingly, line between the creation and consumption of contents in Web 2.0 environment is hazy. Users create contents in Web 2.0 compliant services as much as they consume it (Maness, 2006).

### **3. Web 2.0: Objectives and Principles**

“Web 1.0 took people to information, Web 2.0 will take information to the people” (Ian Davis, 2005).

As opined by Davis (2005), Web 2.0 is all about user participation. It follows the ‘user at the centre stage’ model by enabling and encouraging participation through open applications and services. The term ‘open’ has two facets in the context of Web 2.0. It is technically open (open architecture, open source software, open standards) with appropriate APIs but also, more importantly, socially open, with privileges granted to utilize and generate contents by anyone from anywhere at anytime. Therefore, design and development of technically and socially open system by using distributed network (as platform) is the primary objective of Web 2.0 entity. This primary objective is supported by other key design issues (McIver, Birdsall, & Rasmussen, 2006) such as -

- ◆ to use emerging technologies like AJAX (which allows users to interact directly with web pages as if they were using a desktop application in the client machine);
- ◆ to use tools through which contents can be exposed or generated, described and freely manipulated (which allow users to gather and present information from a range of sites and in new innovative multimedia ways);
- ◆ to apply user centred design and simple intuitive interfaces (which provide users easy to use, intuitive tools, making the experience of locating, creating and sharing information as simple as possible);
- ◆ to design mechanisms that value and trust community of users as co-developers, content generators and metadata contributors (which actively and regularly inform users of updates while also soliciting them for their opinions and thoughts on service enhancements); and
- ◆ to develop channels to release frequent and rapid updates of data and software (fixes and features) on a continual basis (a concept termed “perpetual beta”, as opposed to the lengthy release cycles and bug fixing of commercial closed source software).

### **4. Library 2.0: Concept and Controversy**

“Web 2.0 and libraries are well suited for marriage, and many librarians have recognized so.” (Jack Maness, 2006).

Web 2.0 technologies are all set to change the way users interact with the resources and services available in the Web. Since the early days of Web, libraries are increasingly using it as a platform to disseminate services. Naturally, library professionals are closely observing this transformation of Web, and started addressing various issues related with this transformation, primarily in biblioblogosphere. Michael Casey (2005) first coined the term "Library 2.0" in his blog ([www.librarycrunch.com](http://www.librarycrunch.com)) to denote implication of Web 2.0 and possible changes in Web-enabled library services. Miller (2005) reported that Web 2.0 principles and technologies could help libraries to serve their patrons better. Maness (2006) identified essential elements of Library 2.0 and listed Web 2.0 tools that have positive impacts on library services. Some researchers put forward theoretical foundations of Web 2.0-enabled library services (Abrams, 2005; Breeding, 2006) and also laid down model application methodology of Library 2.0 services (Habib, 2006). However, there is confusion and controversy in library community over the broad nature of definitions and novelty of the concept (Crawford, 2006; Lawson, 2006; Peek, 2005; Tebbutt, 2006).

The definitions given by early researchers and bloggers vary greatly in terms of scope, coverage and nature. Some of the definitions are given below to identify essential attributes of the concept Library 2.0:

- ◆ Library 2.0 is available at the point of need, visible on a wide range of devices, and integrated with services from beyond the library such as portals, Virtual Learning Environments and e-Commerce applications. (Ken Chad and Paul Miller, November 2005)
- ◆ It is a model for library service that encourages constant and purposeful change, inviting user participation in the creation of both the physical and the virtual services they want, supported by consistently evaluating services. It also attempts to reach new users and better serve current ones through improved customer-driven offerings. (Michael E. Casey and Laura C. Savastinuk, January 2006)
- ◆ Library 2.0 is the application of interactive, collaborative, and multi-media web-based technologies to web-based library services and collections. (Jack Maness, June 2006)
- ◆ Library 2.0 simply means making your library's space (virtual and physical) more interactive, collaborative, and driven by community needs. Examples of where to start include blogs, gaming nights for teens, and collaborative photo sites. The basic drive is to get people back into the library by making the library relevant to what they want and need in their daily lives...to make the library a destination and not an afterthought. (Sarah Houghton, September 2006)
- ◆ Library 2.0 describes a subset of library services designed to meet user needs caused by the direct and peripheral effects of Web 2.0. (Michel Habib, November 2006)

- ◆ Library 2.0 is a loosely defined model for a modernized form of library service that reflects a transition within the library world in the way that services are delivered to users. The concept of Library 2.0 borrows from that of Business 2.0 and Web 2.0 and follows some of the same underlying philosophies. This includes online services such as the use of OPAC systems and an increased flow of information from the user back to the library. (Wikipedia, May 2007)
- ◆ Library 2.0 is very much influenced by technology-driven, two-way, social interactions between staff and staff or staff and patrons. L2 has provided a framework within which we've been able to re-evaluate virtually every aspect of classical librarianship with the end goal of usability and findability in mind. (Michael Stephens, May 2006)

Library 2.0 = (books 'n stuff + people + radical trust) x participation. (John Blyberg, February 2007)

## 5. Library 2.0: Application of Web 2.0 Tools

"It is a matrix of dialogues, not a collection of monologues." (Jack Maness, 2006).

The software tools and services, which are making dream of Web 2.0 a reality, may be categorized into four major groups (not entirely mutually exclusive), and these groups of software are essentially acting as components of Library 2.0 phenomenon Tools and services that are playing key roles in making Library 2.0 a reality are listed below alphabetically with brief note on their areas of application.

Blogs	:	An increasingly quick and popular way to share your thoughts with the world. Blog is short for web log—an online journal where information (not only text, but also audio, photographs and video) is posted on a regular basis and appears in chronological order.
Digg	:	Interactive news sites where users submit and decide what stories are shown. Users can then click on the digg button attached to the story to indicate they like the story. News items receiving sufficient number of diggs are listed in the homepage for further comments.
Flickr	:	A photo sharing service that allows users to upload, share, comment on, and categorize photographs. Users can label photographs using "tags" or keywords (effectively subject indexing but without a controlled vocabulary).
Instant Messaging	:	Allows real-time text communication between individuals.
Jumpcut	:	Gives users access to free editing tools that allow them upload, edit, remix and publish video footage.

LibraryThing	:	Allows users to catalogue their books and share lists with each other. Librarians and patrons can thereby interact and recommend their resources to each other. Members can view book cover images, comment, recommend and review books, form special interest groups, enter DDC number, rearrange books on virtual shelves, and add star rating of books.
Mashups	:	Mashups are applications that take data from more than one (often unrelated) online source and combine it to create new hybrid services unintended by the original content owners.
MySpace and Facebook	:	Allows users to set up interactive and personalized web profiles detailing personal information like; education, age, interests, and hobbies. Users can upload photographs, videos, and music, create a blog, post comments on other user profile pages, and send messages to other users.
PaperBackSwap	:	An interesting Web 2.0 service that operates as a lending library.
Podcasts	:	Podcasting is simply making audio files (most commonly in MP3 format) available online so that users can then download them to their desktop media player (users need a podcatcher, a piece of software that allows downloading podcast episodes via a RSS feed).
RSS feeds	:	RSS (Really Simple Syndication) allows users (after subscribing) to receive any new content added by a website, thus avoiding the necessity of continually visiting sites to check for updates.
Second Life	:	Second Life is a subscription based virtual world where registered users interact by building, playing, working, and flying alongside other virtual characters.
Social Bookmarking	:	Social bookmarking service allows users to store their bookmarks online. Favourite bookmarks can be described, tagged, collaboratively shared, and searched for by others (del.icio.us is currently the most popular service in this category).
Tags and Folksonomies	:	Folksonomy is the name given to a collection of tags, effectively a "bottom-up" user generated taxonomy as opposed to an authoritative top down hierarchical taxonomy like LC Subject Headings.

Technorati	:	A site that provides searching facility and clearinghouse for all things blog.
Wikis	:	Allows collaborative creating, editing and storage of contents by a group of users. Wikis are ideal for specific projects and collaborative knowledge sharing (Currently the most well known wiki is Wikipedia, the free online encyclopaedia that harnesses the collective intelligence of its contributors).
Writely.com	:	A free online word processor through which users can create, format, spell check, change fonts and font size and also place images in documents. Writely also allows uploading and downloading of word documents. In addition users can collaborate with others in editing documents online and subsequently blog them.
YouTube	:	Allows users to upload, tag, watch, rate, review, view, and blog video footage, and even create play lists.

**Table 2: Web 2.0 tools for Library 2.0 application**

## 6. Conclusion

Library 2.0 is a new way of providing library service through new Internet technologies, with emphasis on “user-centered” change and interaction. Like Web 2.0, a full-featured Library 2.0 OPAC gets better the more users are involved in the process of interacting with the catalog and sharing content. Librarians have been working to retool library catalogs in order to make them more useful for patrons to find, organize, and interact with information in a way that has infinite potential for user customization. These new types of catalogs are a shift from “isolated information silos” to “interlinked computing platforms.” In the past the information flow was mostly one way, from library to user. With new web tools information can be released to flow in every direction (library to user, user to library, library to library, and user to user). Jessamyn West, on her librarian.net website, authored “What We Want: An OPAC Manifesto,” which broke down the needs of library staff, geeks, and users in their OPAC. These valuable suggestions inform librarians of the flexibility, customizability and plain language approach that is desired by users in their OPAC. Librarians should be aware of these issues so that planning for improvement can begin. Library 2.0 has been a source of debate in the blogosphere. Some librarian bloggers have argued that these key principles are not new and have been part of the service philosophies of many library reformers since the 19th century. Others

are calling for more concrete examples of how libraries can get to Library 2.0. Walt Crawford, for example, argues that Library 2.0 comprises a combination of tools and attitudes which are excellent ideas and not new to librarianship, a few business- and tool-focused attitudes which will not serve all users and user communities, and incorrectly places libraries as the appropriate source for all users to gather all information. Proponents of Library 2.0, such as Stephen Abram, Michael Stephens, Paul Miller and others, have spoken to these criticisms, arguing that while individual pieces of Library 2.0 may not be entirely new, the convergence of these service goals and ideas with many new Web 2.0 technologies has led to a new generation of library service.

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### About Authors

**Dr. Parthasarathi Mukhopadhyay**, Lecturer, Dept. of Lib. & Inf. Sc. , University of Burdwan.

**Dr. Subarna K Das**, Senior Lecturer, Dept. of Library and Information Science, Jadavpur University.