

## RSS 2.0: Experience with Implementation in a Closed Intranet

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### Abstract

*Web 2.0 technologies provide opportunities in various ways to add value to e-services to the world. This term Web 2.0 is widely used to cover a lot of different things especially online on the Internet. These push technologies open new challenges for Library applications too. These powerful e-services reflecting the 2.0 movement integrate dissimilar data to make it more focused for user needs, integrate data within specific user tasks, facilitate collaboration and team use of information, and allow creation of new information and value by users online. However, RSS is one of the easiest and most seamless ways to connect and be informed. RSS (Rich Site Summary or Really Simple Syndication) is basically a format to deliver updated Web content. This paper describes the implementation of RSS 2.0 feed into an online information Gateway in a local Intranet environment thoroughly. Implementation of RSS feed provides news and information merely not static but also with a click. This paper highlights the features and technologies being used for implementation in a closed intranet environment.*

**Keywords:** Web 2.0, RSS, XML, RDBMS, Digital Library, Intranet

### 1. Introduction

The term “Web 2.0” was coined by O’Reilly Media in 2004 and refers to the second generation of Internet based services such as social networking sites, Wikis and communication tools that emphasize online collaboration and sharing among users. Tim O’Reilly summarized Web 2.0, “Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: Build applications that harness network effects to get more people to use them.” In short, the foundation of Web 2.0 is collaboration. At the core of Web 2.0, three distinct technologies empower individuals to collaborate on a scale never before achieved viz. Blogs, Wikis and RSS. While these three

technologies first emerged from the consumer market through social networking sites such as myspace.com, they are evolving to address the needs of the enterprise/organisation as well as digital libraries and in the process of doing so, provide early adopters with unparalleled competitive advantage.

### 2. Web 2.0: The New E-World Emerging Ahead

Web 2.0 technologies bring capabilities to communities that were not possible previously with so called Web 1.0.

Web 2.0 enables users to securely access structured and unstructured information across the organisation in a single search, enhancing collaboration both internally and externally boosting the usability of applications, improving the ability and integrated applications as well as



simplifying application upgrades and maintenance. The strategic value of these web 2.0 capabilities depends on the organization's strategy. However, without proper oversight, this new information environment can become far too wild for the organizations / libraries to navigate safely. Implementing Web 2.0 in the organizations / libraries can quickly create an uncontrolled information heap.

### **3. Role of Web 2.0 in a Research Library**

The drivers of collaboration are persuasive in terms of productivity, real-time knowledge gain, sharing, workflow, responsive, relevant communications (internal and external), content publishing and other cost efficiencies and a competitive edge. However, the impact of mass collaboration and Web 2.0 extends far beyond research and user support.

Libraries/ Institutions that have chosen Web 2.0 technologies have found that the enthusiasm for information creation that such technologies can engender in knowledge workers can have enormous organizational benefits. However, it would be organization's/library's strategy to accept which Web 2.0 technologies to be implemented. Some organizations / libraries take few such technologies as initiation to this new era of collaboration and keeping other under planning stage with proper foresightness. RSS is one such technology to be initiated without much in-depth knowledge of how to build / aggregate it or risk like information overload, quality control, reputation damages of information editing due to unsporting conduct by users etc.

### **4. RSS and Syndication**

In principle & technically, RSS is an XML-based data system for websites to exchange files that contain publishing information and summaries of

the site's contents. Indeed, in its earliest incarnation, RSS was understood to stand for Rich Site Summary. There are a number of RSS formats (RSS 0.91, RSS 0.92, RSS 1.0 and RSS 2.0). The major component of Web 2.0 technology is RSS Software programs known as "Feed Readers" or "Aggregators" that routinely check user's "subscribed feeds" to see if any of those feeds have new digital content such as news, blogs or podcasts. If there is new or updated content, the digital content is retrieved and that content is presented to the user. Some aggregators take existing web feeds and combine them into a new feed that is a summary of multiple feeds, blogs, podcasts, etc. on a specific topic. As new methods of information creation spread to institutional users, finding ways to exploit these new resources is becoming equally important for professional users. Furthermore, developments in the global sphere have increased the level of expectations among all possible users who expect their work tools to be as interactive and receptive to be changed.

### **5. How to Build an RSS for an Intranet**

In the spirit of open standards that Web 2.0, RSS uses the potential of XML (eXtensible Mark-up Language). The principle of Intranet conveys that all tools and technologies are inherent from the Internet but available within the closed Network of institutions. To build a RSS feed into existing website within the Intranet, there are two major implementations. First one is rather simple, with the assumption that Internet access is available to the website where RSS is proposed. In this case, one can build a RSS aggregator by subscribing all possible Feeds from various sources like, publishers, databases, news agencies etc and customised with local variables like style sheet of CSS, layout, customised XML etc.

In second case, the implementation requires synchronization with data sources like RDBMS, XML, unstructured data sheets, webpages etc. Working knowledge to XML, structure of RSS 2.0 and its all tags is very essential. The RSS 2.0 compliance XML data structure need full XML handling either generating through Open Source / freeware softwares or tagging manually. Open source / freeware need expertise in the programming language it is coded and over and above, customisation needs lots of inputs/feedbacks from forum/discussion. Manual tagging of each <item> tag is very time consuming and prone to human errors. SIRD has infrastructure and expertise to the solution that is capable of working with native XML automatically and removing the need to manually insert XML tags. These approaches allow us to overcome problems that are typically associated with XML and dynamic nature of generating the Feed.

With full use of XML methods, Dynamic RSS is being generated from the RDBMS using PHP scripting language. Fig 1 shows the screen shot of Online Information Gateway 'Lakshya' where RSS 2.0 Feed has been incorporated.

Following tools and application are used in the development of RSS Feed:

- ◆ Server Side scripting language PHP
- ◆ MySQL RDBM containing the details of all e-resources like, title, publisher name, ISSN, journal history, status, type of journal etc
- ◆ Microsoft IIS 6 Web Server
- ◆ Acrobat Dreamweaver 8
- ◆ XML Notepad 2007



Figure. 1

## 6. Experience RSS Facilities

Before launching RSS Feed, in-depth knowledge has been acquired with its functionality. Initially in test phase, we examined some of trial access software to build the Feed. To integrate, the dynamic nature of content updation being carried out in our online resource database, we decided to write our own software for this feed. Dynamic loading at request has been carried out with asynchronous display in PHP by displaying the whole page. Fig 2 shows the display of Feed being implemented on Lakshya.

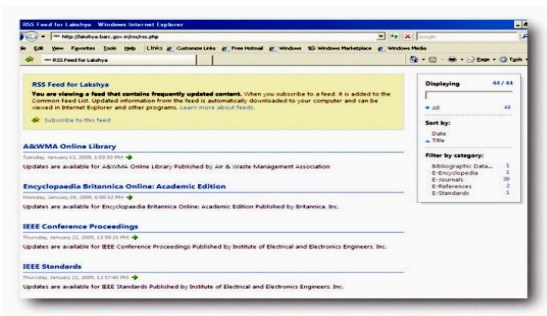


Figure 2

### Structure of an RSS file

Any syndication file contains a list of items, articles, notes or other documents, and a description of the site which is the source that is known as the channel. For the <channel> as well as the elements, we have provided a <title> and <description>, as well as a

URL. Each <item> elements contains <title>,<link>,<description>,<pubDate> and <category> tags. Every resource has been categories under following seven identities as shown in Table 1 and accordingly displaying/searchable/browse in the feed display.

```
<category>E-Journals</category>
<category>E-Encyclopedia</category>
<category>Bibliographic Database</category>
<category>E-Standards</category>
<category>E-References</category>
<category>E-Tutorial</category>
<category>E-Dictionary</category>
<category>E-Prints</category>
```

Table 1

Figure. 3 is a XML code being generated by the software script.

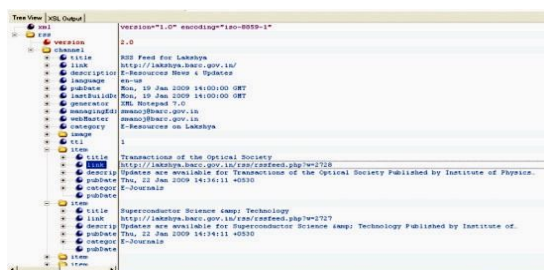


Figure .3

## 7. Conclusion

Scientific Information Resource Division, Bhabha Atomic Research Centre is committed to bringing innovations to their community in a timely fashion and RSS 2.0 implementation is one step ahead of this approach. RSS as a web 2.0 service of online information Gateway “Lakshya”. By offering RSS services, Lakshya allows readers the updated informational content from a wide range of digital resources, all within <http://lakshya.barc.gov.in>. Readers can subscribe the feeds as well as click from the main page link.

In order to clear up some of the inconsistencies between RSS versions and the problems with the way they interoperate, we are under planning & development of a newly standardized syndication system “Atom”.

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