RSS Made Easy:
A Basic Guide for Librarians

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ABSTRACT. Really Simple Syndication (RSS) uses extensive mark-up language (XML) to constantly scan the content of Web sites for updates, which will then be delivered to subscribers' desktops or mobile devices through an RSS feed. RSS helps professionals stay current while reducing workloads. Librarians need to get familiar with RSS to educate their users, to stay current in information technology, and to generate and disseminate selected information to target user groups. doi:10.1300/J115v26n01_04 *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@ haworthpress.com> Website: <http://www.HaworthPress.com> © 2007 by The Haworth Press, Inc. All rights reserved.]*

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INTRODUCTION

RSS XML icons are pervasive on newspaper Web sites, portals such as Yahoo! or Google, Web logs, databases, including PubMed, and other sites relevant to the health sciences and biomedicine. How can libraries use RSS to inform their users of ever-changing information important to medical research and practice? How does RSS relate to promotion of medical libraries' resources and services? Moreover, how can librarians use such tool to stay abreast of the profession and individual interests? This article will address all of these questions; will discuss RSS basics, the use of RSS feeds, publishing feeds on the Web, and implementing RSS as an information delivery–or current awareness–tool; and will review the benefits of RSS for libraries generally.

What is RSS? Many definitions can be found, but the most commonly used is that RSS is an acronym for Really Simple Syndication, where syndication distributes content of all types throughout the Web to persons that wish to receive that content after they have specifically "subscribed" to "feeds" of interest. RSS uses an extensive markup language (XML)-based format for content distribution and to constantly scan the content of Web sites for their latest updates, including, for example, news headlines, events, journal tables of content, database searches, Web logs, or audio files. These updates are then automatically delivered to the subscribers' computers or mobile devices through an RSS feed.

RSS has become one of the most popular tools for sharing and distributing news and any other Web-based content where timeliness is valued. This valuable and easy-to-use tool enables professionals to stay current with little effort and gives them complete control over how they receive information. New, updated information is automatically received without the need to remember to check Web sites of interest manually or to clutter one's e-mail inbox.

What is a feed? RSS feeds provide short synopses or snapshots of the full or selected content of sources or Web sites to which the user has subscribed. These short listings may contain metadata such as a title or headline and a link offering users a quick click to reach further information on the source Web site, if desired, but without initially overwhelming the reader with detail. Users may subscribe to an unlimited number of feeds and view them all at once or individually using a RSS reader or news aggregator. RSS readers allow users to both track and organize the information they receive by category. One poll from the RSS webblog <http://rss.Weblogsinc.com/2006/01/28/poll-results-show-our-readers-

track-dozens-of-rss-feeds> estimates that 12% of its readers track more than 390 feeds.

Since RSS allows the user's computer to fetch, track, and organize information efficiently, it plays an important role in scholarly publishing. Some of medicine's most reputable Web sites and databases have implemented RSS services as an effective means of disseminating information rapidly; these include the *New England Journal of Medicine*, the Nature Publishing Group, and the National Library of Medicine's PubMed.

BACKGROUND

The development of RSS may be traced back to 1997 when the Resource Description Framework (RDF) was created.[1] In 1999, Netscape created RSS 0.9 to be used for MyNetscape. However, Netscape lost interest soon after and abandoned RSS development.[2] UserLand, a firm that developed Web log products, picked up RSS and released the RSS 0.9 series and eventually its current widely used RSS 2.0. Meanwhile, the Working Group at O'Reilly Publishing developed RSS 1.0 using the new specification based on the RDF standard instead of on the previous RSS 0.9 series. Though RSS 1.0 and 2.0 are incompatible for RSS feed developers, RSS feed aggregators can read feeds of both versions. To introduce stability to syndication, a new initiative for another syndication format, Atom, was developed. The Atom Syndication Format is viewed as the successor to RSS and intends to be extensible for different content areas such as licensing, versioning, and access control.[3] To create a feed, one must select one of the formats. Atom is now an Internet Engineering Task Force (IETF) standard, bringing stability and a natural community to support its use.[4]

RSS feeds became widespread with the advent and increasing use of Web logs (blogs) and are one of the most important components of this community. Generally, when a blog writer adds a new entry, the blog's RSS feed will be automatically updated to inform all persons subscribing to the blog. In November 2002, the *New York Times* began offering its readers the ability to subscribe to RSS news feeds from its major sections. The *New York Times*' adoption of RSS was called the "tipping point" in driving the RSS format as a *de facto* standard, significantly increasing its acceptance in both blog and mainstream journalism.[1]

SUBSCRIBING TO AND READING RSS FEEDS

As RSS feeds are published on the Web using XML codes, a potential user will need a RSS "reader" or aggregator to display those code-based feeds in a readable format. RSS aggregators collect RSS feeds from reader-subscribed sites and present the updates from the sites on a single page in easy-to-read and easy-to-organize formats. To read a feed, one must subscribe to it first, using a selected aggregator or feed reader. Most sites that offer a RSS feed have a small icon bearing the label XML or RSS.

There are three types of commonly used no-cost feed readers/aggregators:

1. *Web-based aggregators*: There are many Web-based aggregators such as the widely used Bloglines <http://bloglines.com> or Newsgators <http://www.newsgator.com/>. Web portals such as My Yahoo <http://myyahoo.com>, Google Reader <http://reader.google.com>, and MyAOL <http://feeds.my.aol.com/> also offer RSS readers as a part of their service tool suites. Web-based readers have several key advantages. They are typically easy to use with straightforward subscribing instructions located on their respective Web sites. They also offer the convenience of being usable anywhere without the need to download software to a computer or mobile device.
2. *Desktop-based aggregators* such as FeedDemon <http://feeddemon.com/> need to be downloaded but often have more powerful features that give users more extensive options for customizing their news feeds.
3. *Web browsers* with plug-in or built-in feed readers include Opera Web Browser <http://www.opera.com/>, Mozilla Firefox <http://firefox.com>, and Internet Explorer (IE) with add-in software Onfolio installed <http://www.onfolio.com>. Browser-based feed readers work the same way as Web browsers' bookmarks. The current version of Mozilla Firefox is notable for having built-in feeds with many news Web sites, which users can supplement with their own choices. Microsoft Corporation acquired Onfolio in March 2006. Users can use the Onfolio built-in RSS reader in IE to subscribe, read, and organize RSS feeds simply by clicking the Onfolio button on the IE Toolbar.[5]

RSS feeds may also be read on mobile devices, including handheld computers or Smartphones using a mobile content service such as

AvantGo. This feature enables users to synchronize RSS feeds as AvantGo channels. Each time AvantGo is synchronized, RSS feeds are downloaded to the mobile device, which may be viewed at any time and location. If one has a wireless connection to the Internet, a Web site can be read in its entirety as desired. Users may save the RSS feed items, view or flip photos in the feed, and personalize the synchronization settings for each RSS channel. Subscribing or creating an AvantGo channel, including RSS feeds, is quite simple.[6] However, users need to register for a free basic AvantGo personal account and download the AvantGo connection software to use its service. Apple, through its iTunes Music Store, offers numerous audio and video files for download to mobile device. These multimedia files, called podcasts, are distributed over the Internet using RSS or Atom syndication.[7]

RSS FOR PODCASTS

Podcasts are the combination of two words, "iPod" and "broadcasts," and provide an increasingly important source of audio and video programs and information. RSS provides an alternative way for librarians to locate multimedia resources for their patrons through subscribing to a podcasting RSS feed using the RSS aggregators aforementioned. After subscribing, podcasting titles or synopses will be displayed on the screen. Just as with feeds of print content, users may review and select the podcasts of interest by clicking the title links on their computer and listen to podcasts with software that plays MP3 or MP4 files such as Windows Media Player or iTunes. Users may also download the podcast's file to a mobile device such as a PDA.

Once a subscription to a RSS feed has been established, updates from the original subscription site will be delivered to the computer. For instance, when a library links Nature's Podcasting page <http://www.nature.com/podcast/index.html> to its Web site, users may conveniently subscribe to the *Nature* Podcasting, which will be delivered straight to their desktop every week when the *Nature* Podcast is published. Librarians may also subscribe to RSS podcasting feeds through podcasting directories or publishers' sites, select podcasts for a target user group, and post them on the Web for downloading or listening. For example, the National Public Radio (NPR) podcast directory provides podcasting to many of its programs. Its podcasting of the Science and Medicine program <http://www.npr.org/rss/podcast/podcast_detail.php?siteId= 4819381>, which provides in-depth reports on medicine, the environ-

ment, space, and more, may be of interest to medical library users. *New England Journal of Medicine* provides an audio summary that covers all newly published issues. McGraw-Hill's AccessMedicine provides podcasting on many current medical topics.

FINDING RSS FEEDS USING DIRECTORIES

In addition to searching or browsing through Web sites to find interesting feeds, users may also browse or search feed directories. Most RSS feed directories have a subject category arrangement to help those who want to discover new or interesting feeds. The following list provides a quick introduction to several reliable RSS feed directories.

- RSSfeeds.com <http://www.rssfeeds.com> organizes its contents with a good structure and user-friendly subject categories. Users may also search the feeds by keyword. "Feed Factsheet" links display detailed information about feeds.
- Syndic8 <http://www.syndic8.com> provides searching and browsing facilities that allow readers to find different types of RSS feeds readily.
- NewsIsFree <http://www.newsisfree.com> provides a large international collection of feeds with browsing and searching options. Readers may browse the news by category, date, or top source, etc., or search for current events. It may be used as a Web-based news aggregator for subscribing and reading feeds that are listed on the site.

PUBLISHING RSS FEEDS ON THE WEB

Information on a library's Web site that is frequently updated and is of interest to a critical mass of a library's patrons is a good candidate for RSS feeds. This might typically include library news; a calendar of events; instructional opportunities; newly acquired resources, including databases, books, or journals; journal tables of contents; or customized literature searches of databases.

A basic understanding of RSS structure makes it easier to use XML files. Before creating an RSS feed document, one must decide which version of RSS will be used and declare it at the beginning of the document. Following is a list the elements required for RSS documents.

The RSS document element begins with "rss" and contains a set of "channel" elements:

```
<rss version = "2.0">
<channel>
   <title> (channel title)</title>
   <link> (channel link)</link>
   <description> (channel description)</description>
   <image>optional attribute</image>
   <item> (items to be published)
      <title> (item title)</title>
      <link> (item link)</link>
      <description> (item description)</description>
   </item>
 </channel>
. . .
</rss>
```

Every channel element must have:

```
A "title" element:
<title>RSS Made Easy</title>
A "link" element:
<link>http://rss.easy.com</link>
A "description" element:
<description>RSS Made Easy is a cool place.</description>
```

Usually these elements precede the "item" elements, which include title, link, and description, but specific order is not necessary. There are many other optional elements such as image and language, which can be added to a channel.

An example of RSS feed, which is used for a new book acquisition list, may look like this:

```
<?xml version="1.0" encoding="UTF-8 ?">
<rss version="2.0">
<channel>
   <title>WSULS New Books Medicine</title>
   <link>http://www.lib. wayne.edu/resources/new_books/index.php
      </link>
   <description>New Titles in Medicine</description>
   <language>en-us</language>
<item>
```

```
<title>Handbook of neonatal intensive care Gerald B. Merenstein,
        Sandra Lee Gardner.</title>
<link>http://elibrary.wayne.edu/record=b3041148</link>
<description>Merenstein, Gerald B. Handbook of neonatal
    intensive care Gerald B. Merenstein, Sandra Lee Gardner.
    Science and Engineering Library</description>
 <guid isPermaLink="false">b3041148</guid>
 <pubDate>Mon, 12 Jun 2006 04:00:00 GMT</pubDate>
</item>
. . . . . (Note: more items can be listed below)
</channel>
</rss>
```

Once an RSS feed has been created, an icon of XML or RSS that bears the RSS link may be placed on the Web site so that users can subscribe to the feed easily. A "What is RSS?" link, which leads to a page that explains what RSS is and why RSS should be used, may be helpful for users who have not used RSS before. Libraries may also promote the RSS feeds through its newsletter, flyers, and e-mailing to target groups.

There are a number of ways to generate a feed from a library's Web site. First, many Web content management systems such as Ektron CMS400 <http://www.ektron.com/cms400.aspx> may have a built-in XML editor that will generate RSS feeds. For Web log Web sites that use blogging software such as TypePad, RSS feeds are likely a built-in option. A webmaster may also consider writing an XML file using software to create feeds and publish it on the Web sites. Several tools listed below may help create RSS easily.

- Windows Client: Super Simple RSS (RSS 2.0) <http://hunterdavis. com/ssrss.html>
- Software that works with the Web authoring tool Dreamweaver: RSS DreamFeeder <http://www.rnsoft.com/en/products/rssdream feeder/>
- Remotely hosted online editor: RSS channel editor <http://www. webreference.com/cgi-bin/perl/rssedit.pl>.
- Server side script: RSS Feed Generator (RSS 2.0), available in HPH or ASP <http://www.2rss.com/software.php?page= rss20docs>

Manually created RSS feeds using text editors are another option. However, when a RSS feed is manually created, XML feed files need to

be updated manually as well as whenever the Web site has been updated. Therefore, feeds created automatically using software are less time consuming and will have fewer errors.

PUBLISH FRESH FEEDS ON YOUR SITE

There are dozens of scripts that help you to incorporate RSS feeds and republish them on your Web site when they may be of interest to a large number of your Web site's users. Tools such as Feed2JS <http://jade.mcli.dist.maricopa.edu/feed/>, RSS include <http://www.rss-info.com/en_rssinclude-simple.html> will let you choose a feed, customize its design, and create a Javascript script to display it, thereby enabling users easily to display feeds from other sources on their Web site. Librarians may create a value-added service for specific user groups by collecting and gaining permission for the use of relevant feeds on a particular topic, including news, hospital, or campus research announcements, library acquisitions, faculty publications, journal tables of content, PubMed "canned" searches, and then publish them on one page using the tools discussed above.

Medical news and publishers' RSS feeds may be useful to library users as well as to a library's staff.

Sample Medical and Health News Feeds

- Reuters Health News
  <http://feeds.feedburner.com/reuters/healthNews/>
- Health RSS Feeds via FIRSTGOV.gov
  <http://www.firstgov.gov/Topics/Reference_Shelf/Libraries/RSS_Library/Health.shtml>
- New York Times Health News
  <http://www.nytimes.com/services/xml/rss/nyt/Health.xml>
- BBC News Health
  <http://newsrss.bbc.co.uk/rss/newsonline_uk_edition/health/rss.xml>
- AP Health Top Stories on Yahoo
  <http://rss.news.yahoo.com/rss/health>
- National Guideline Clearinghouse
  <http://www.guideline.gov/rss>

- FDA's RSS News Feeds
  <http://www.fda.gov/cdrh/rss.html>
- NIH Podcasts
  <http://www.nih.gov/news/radio/nihpodcast.htm>
- Medscape
  <http://www.medscape.com/px/urlinfo>
- Google News-Health
  <http://www.google.com/news?topic=m&promo=houseads&
   output=rss>

Sample Journal Publishers' Feeds

- *JAMA* and Archives journals for awareness services
  <http://pubs.ama-assn.org/misc/rssfeed.dtl>
- Although the *British Medical Journal* Publications does not have a
  central RSS feed page for all of its journals, it does provide RSS
  feeds for its individual journals such as the *BMJ*
  <http://bmj.bmjjournals.com/misc/rss.shtml>
- *Nature* publishes a weekly free audio show that is available for
  podcasting, featuring highlights from news and articles published
  in *Nature*
  <http://www.nature.com/nature/podcast/index.html>
- *Cell* Press Journal feeds
  <http://www.cell.com/misc/page?page=feeds>
- *New England Journal of Medicine* feeds
  <http://content.nejm.org/rss/current.xml>
- *Blood* feeds
  <http://www.bloodjournal.org/rss/>
- *BioMed* Central
  <http://www.aidsrestherapy.com/rss/>
- *PLoS Medicine*
  <http://medicine.plosjournals.org/perlserv/?request=index-html&
  issn=1549-1676>

Sample RSS Applications in Library

- Johns Hopkins University's Sheridan Libraries Podcasts
  <http://www.library.jhu.edu/podcasts/>
- In the Spotlight: News from Northwestern University Library
  <http://www.library.northwestern.edu/news/>

- University of North Carolina University Libraries
  <http://www.lib.unc.edu/rss/>
- University of Saskatchewan Library List of Electronic Journals
  <http://library.usask.ca/ejournals/rss_feeds.php>

Sample Getting Started RSS Feeds for Librarians

- National Library of Medicine Technical Bulletin RSS Feed
  <http://www.nlm.nih.gov/rss/techbull.rss>
- The Shifted Librarian
  <http://www.theshiftedlibrarian.com/>
- The Krafty Librarian
  <http://kraftylibrarian.blogspot.com/2006/06/rss-feeds-and-medical-libraries.html>
- Hospital library advocacy
  <http://hosplib.blogspot.com/>
- LISFeeds.com
  <http://www.lisfeeds.com/>
- Association of College and Research Libraries Blog
  <http://acrlblog.org/>
- The American Library Association Tech Blog
  <http://www.techsource.ala.org/blog/>
- Infotoday Newsbreak RSS Feeds
  <http://www.infotoday.com/newsbreaks/rss/>

DISCUSSION

RSS technology benefits individuals, publishers/content developers, and webmasters.[8] For individuals, RSS makes it easy to quickly scan condensed and reasonably well-structured information with clearly marked and dated topic materials published on numerous Web sites. Feeds are generally themed, allowing users to opt in to feeds that are of interest, saving them appreciable time in their commitment to staying current with fast-moving subjects, news, or events. Users have complete control of their information flow without dealing with e-mail and spam and may enjoy the mobility of reviewing or reading updated feeds while on the move. They may also organize and save the information received for later reference and locate the most popular topics or trends in a particular subject using an RSS aggregator's monitoring and

tracking functions. For publishers/content developers, RSS relieves the publisher's burden to maintain mailing lists, or follow privacy guidelines, or to firewall spam in order to disseminate relevant information.[9] A publisher may automatically deliver the most up-to-date contents to users' devices; create keyword-based theme contents; and establish trust, reputation, and ongoing communication with users. RSS enables webmasters to deliver their updated information instantly to users automatically.

Though RSS is simple and easy to use, it is not standardized, particularly with the difference between RSS 1.0 and 2.0. Different developer groups may have more control of their RSS specifications, and content developers may use different formats to develop RSS feeds that are incompatible to one another and cause confusion to users.[10] Servers have little control of heavy hits generated by a flood of users' requests on large popular RSS sites and may cause a RSS feed aggregator to drop items occasionally. As RSS feeds may not be read without an RSS reader or aggregator, librarians need to train users to familiarize themselves with aggregators so they may utilize the technology for their research and current awareness. Librarians also need to introduce tips on how to find useful feeds using search engines or RSS directories, and recommend RSS feeds for their target user groups.

Since PubMed and other prestigious publishers have implemented RSS technology, RSS is also important to the medical librarian community. To provide state-of-the-art services to patrons, librarians need to educate themselves and provide awareness or even training to patrons on RSS technology. More and more librarians are learning, catching up on new technology, and employing it to facilitate new and existing services. For instance, Iowa State Library Rich Site Services Web site <http://www2.iastate.edu/~CYBERSTACKS/RSS.htm> lists libraries that provide RSS feeds. Georgia State University Library has links to ACS Publication RSS page, which makes all of the RSS-enabled American Chemical Society (ACS) journals available <http://www.library.gsu.edu/news/index.asp?typeID=56>. Kansas County Public Library <http://www.kclibrary.org/rss/> lists a variety of RSS feeds for their users. Health sciences libraries may also promote selected third-party RSS feeds to facilitate their patrons' current awareness, research, and patient care. Medical libraries may simply compile relevant third-party RSS feeds and create links for their users so that the useful information will be pushed to their patrons in a user-friendly manner.

In addition to using third-party RSS, libraries may use RSS feeds to market ideas, new workshops/classes, activities, event announcement,

new acquisitions, exhibitions, and so on. RSS may help generate book lists. Since patrons always like to know what new items are available in the library, book lists could be a favorite service to patrons. Librarians may publish new items by subjects, create a list of DVDs, reserved books, videos, CDs, and deliver them via RSS feeds. Libraries may create portal services for their patrons, including useful RSS news, tables of contents services, the most up-to-date literature searches on hot topics, new acquisition of books, DVDs, podcastings, etc., and use RSS to promote portal services. For example, the Wayne State University Library System uses RSS to disseminate new titles in their catalog on different subjects <http://www.lib.wayne.edu/resources/new_books/index.php>. McMaster University <http://library.mcmaster.ca/> provides RSS feeds for different sections, including alerts, learning commons news, health sciences, new books, e-resources, trial e-resources. More and more librarians are learning to use RSS feeds as their information alert service. Librarians may also use blogs in conjunction with RSS technology to facilitate communication and share experiences about products and services among patrons and themselves. Health sciences libraries may suggest database publishers or full-text journal management companies to provide RSS feeds for current awareness.

CONCLUSION

Over the past decade, libraries have undergone greater change than in any previous decade; these changes were spurred by new technologies, which continue to create new opportunities for libraries and changes to the traditional ways that libraries do business. Librarians must be innovative, creative, and willing to take risks to try different things in order to provide value-added services to their patrons. As RSS becomes more popular as a tool of distribution and syndication of information, more medical librarians will learn how to publish their own feeds on their Web sites and will explore RSS and new technologies to provide state-of-the-art services to their target users.

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