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RSS Feed and RDF Web Syndication Tools for Web Developers

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Abstract

Web feeds allows software programs to check for updates published on a website, RDF Site Summary or Rich Site Summary or Really Simple Syndication (RSS) is a tool that allows organizations to deliver news to a desktop computer or other Internet device. This article mainly focuses on the features and functions of RSS feeds, how it will helpful in the web master up to date the information. Some organizations or Libraries offer several RSS feeds for use in an RSS reader or RSS enabled Web browser. In the present scenario number of web developers set up these tools for subscribing to RSS feeds, users can easily stay up-to-date with areas of the Library's site that are of interest. In this article author also highlights the different standard tools and its availability and functions of Web syndication, RSS, RDF and Atoms.

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Keywords

RSS, Atoms, RDF, Web Syndication, Content Syndication, Web Content Syndication, Web Developer

Introduction

Library feeds consist of headline, brief summary and a link that leads back to the Library's Web site for more information. Content Syndication is a mechanism using which the contents of a website including articles, news, blogs and forums are published partially or fully to other websites in a specific format. RSS and Atom are the two main standards of web syndication. Web syndication is an amazing way to get information on current updates. The RSS or RDF and Atom are indicating that a web feed is available on a web page or creating and updating web resources. Standard XML file format ensures compatibility with many different machines or programs. In this article the author highlights the main functions and different free RSS feeds available and its status. RSS feeds also benefit to users who want to receive timely

updates from favorite websites or to aggregate data from many sites.

RSS is sprouting all over the Web, connecting weblogs and providing news feeds. Originally developed by Netscape in 1999, RSS is an XML based format that allows web developers to describe and syndicate web site content. Using RSS files allows developers to create a data feed, that supplies headlines, links and article summaries from a web site.

RSS is a format for syndicating news and the content of news-like sites. Web syndication is an amazing way to get information on current updates. Web syndication is a form of syndication where a separate website provides information on the current updates of another website which may include anything from a latest news or forum

posts. Sometimes, licensing a website's contents to make other websites use it is also termed syndication (Howtoconnect, 2016).

Hammond, Hannay & Lund (2004) the study highlights to investigate the use of RSS by library professionals in India. A structured online questionnaire was posted in LIS-forum mailing list to collect data for the study. The study found that majority of the respondents are aware of RSS and they are using it for providing various library services. Current Awareness Service and news updates are the major RSS based services provided by the librarians. The majority of the respondents given feedback the major disadvantage of RSS is that not every website offer RSS feed. This study provides useful information about the current use of RSS by the library professionals in India.

RSS feed and other Web Syndication Tools play an important role in the fields of web technology. The previous researches in India and other country have often focused on:

- RSS Applications in Libraries and Information Centres (Bansode, Dahibhate & Ingale, 2009).
- What is RSS and how can it serve libraries (Çelikbaş, 2004).
- Using RSS feeds and social book marking tools to keep current (Cuiying, 2008).
- RSS Feeds and its Application in Library Services (Dey & Sarkar, 2009).
- Lists applications for creating RSS feeds (Feed-Readers. 2013).
- Top 10 Free Tools to Create RSS for Any Website (FTG. 2016).
- The Role of RSS in Science Publishing: Syndication and Annotation on the Web (Hammond, Hannay & Lund, 2004).
- RSS based information services in library: A study (Harinarayana, Kumar & Pradeep, 2004).
- What are Atom and RSS feed? Which is better for Website? (Howtoconnect. 2016).
- Use of RSS feeds by library professionals in India (Mohamed, Reshma & Manu, 2014).
- RSS Tutorial: for Content Publishers and Webmasters (Nottingham, 2005).
- RSS vs. ATOM. (Saksoft. 2016).
- Use of web 2.0 tools in academic libraries: A reconnaissance of the International Landscape (Tripadi & Kumar, 2010).

The main objective of this study is to identify the update, relevant, pages/sites we use regularly on a web. The specific objectives are:

- To provide an overview of RSS Feed and its functions in the web development
- To explore the use and awareness of these tools
- To identify the purpose and academic efficiency of these tools
- To identify the frequently used RSS feeds by web developer

Materials and Methods

Research is guided by the specific research problem, question. The study identified the different types of RSS feed and its use in the web technology. In this study, the investigator finds out the different RSS feeds retrieved from the internet. The methodology is content analysis of the websites of the Web Syndication Tools of RSS and RDF only. There were more web based data collected from the internet, but this study has focused on Compilation of Atom and RSS Feed, content syndication tools and general information about RSS and RDF tools. The content analysis work was done during January to November, 2016. The following are the list of electronic information resource gateways selected for the study:

- Content Syndication Tools
- Compilation of Atom and RSS Feed
- Resource Description Framework (RDF)
- About Web syndication
- List of Popular RSS and Atom tools and
- How to select and publish these RSS Feeds

Presentation and Discussion of Findings

RSS solves a problem for people who regularly use the web. It allows us to easily stay informed by retrieving the latest content from the sites they are interested in. We save time by not need to visit each site individually. We ensure our privacy by not needing to join each site's email newsletter.

RSS Feed

RSS is a way to get information and updates from a website. The feed formats provide web content or summaries of web content together with links to the full versions of the content and other meta-data. This information is delivered as an XML file called a feed, web feed, stream or channel. A feed is an XML-based document which contains content items, often summaries of stories or weblog posts with web links to longer versions. Weblogs and news websites are common sources for web feeds but feeds are also used to deliver structured information ranging from weather data to "top ten" lists of hit tunes.

Functions of Good Feeds

RSS and Atom are easy to work with, but like any new format you may encounter some problems in using them. This section attempts to address the

most common issues that arise when generating a feed.

- Distinct Entries
- Encoding HTML
- Character Encoding
- Communicating with Machines-Making your Feed Cache-Friendly
- Validate
- Meaningful Metadata
- XML Entities
- Communicating with Viewers

The RSS is a standard web tool enables publishers to syndicate data automatically. It uses a family of standard web feed formats to publish frequently updated information, blog entries, news headlines, audio, video etc.

RSS Tools

RSS has rapidly become an alternative communication venue. In order to understand the full benefits, consider utilizing some of the following tools and resources (Housley, 2013).

- 1.) RSS Tools
 - RSS Readers
 - FeedDemon
 - FeedScout
- 2.) RSS Creation
 - FeedForAll
- 3.) RSS Articles and Tutorials
 - RSS Specifications
 - Make RSS Feeds
- 4.) Ebay Monitoring Using RSS
 - Free Bidding Tools
- 5.) Web Monitoring
 - PubSub
 - Google News Monitoring Using RSS
- 6.) Other RSS Tools
 - RSS2Wap
- 7.) RSS Graphic Tool
- 8.) Displaying RSS
 - Java Options
 - Quick RSS Feeds

- FeedRoll
- RSS to Javascript
- PHP Options
- FeedForAll's rss2html.php
- FeedRoll Pro
- RSS2HTML
- 9.) RSS Blogs
 - RSS Specifications
 - KbCafe
- 10.) Publishing List / RSS Newsgroups
 - RSS Syndication
- 11.) RSS Related Forums
 - 2RSS
 - FeedForAll Forum
 - German RSS Forum
- 12.) Locate RSS Feeds –
 - Syndic8
 - Feedster's FeedFinder
 - RSS Discovery
 - RSS Locator

Atom

Atom Syndication Format is a web standard program to check for updates published on a website. It is simple way to read and write information on the web, allowing one can to easily keep track of more sites in less time and to seamlessly share our words and ideas by publishing to the web. The Atom Syndication Format is an XML language used for web feeds, while the Atom Publishing Protocol (AtomPub or APP) is a simple HTTP-based protocol for creating and updating web resources. The Atom format was developed an alternative to RSS. Ben Trott, an advocate of the new format that became Atom.

RSS and Atom Tools

RSS has rapidly become an alternative communication venue. Most news sites including virtually all blogs will publish what is called an RSS feed which is regularly updated with the latest available headlines or article. It is an XML format

which is designed to be read by machines rather than humans. In order to understand the full benefits, consider utilizing some of the following tools and resources.

An RSS aggregator makes it very convenient to follow up on news from a large number of sources in a single place. Most RSS feeds are produced automatically by the same content management software which also generates the web pages dynamically.

Table 1. shows that the RSS feeds and its position and rank according to Alexa. The Reddit tools in the 25 rank, Digg in the 904 positions and Areapal in the last position of this selected list.

Comparison of RSS and Atoms elements

The Table-2 shows the RSS elements alongside Atom elements where they are equivalent and some elements names are changed in both RSS and Atom.

Table.1 Popular RSS and Atom tools
























Name	Started	Emblems	Alexa Rank
Reddit	2005	 reddit	25
Digg	2004	 digg	904
Hacker News	2007	 Y Hacker News	1624
Slashdot	1997	 Slashdot	1950
Fark	1997	 FARK	3,553
Newsvine	2006	 newsvine	3,777
NowPublic	2009	 NowPublic. Crowd Powered News	1,096,270
Areapal	2009	 areapal	4,284,788

Table.2 Comparison of RSS and Atoms elements

RSS	Atom
author	author*
category	category
channel	feed
copyright	rights
-	subtitle
description*	summary and/or content
generator	generator
guid	id*
image	logo
item	entry
lastBuildDate (in channel)	updated*
link*	link*
managingEditor	author or contributor
pubDate	published (subelement of entry)
title*	title*
Time to live	-

Note: * indicates that mandatory fields

Table.3 Content Syndication Tools

Sl.No.	Name	Emblems	Started	Features/Functions
1	Adblade		2008	Content-style ad platform on the Internet
2	Addthis		2004	Use of a web widget
3	Disqus		2007	Blog comment hosting service
4	Feed43		2006	Converts any web page to an RSS feed on the fly
5	Gravity		2008	Archive for informational purposes
6	OutBrain		2006	Sponsored website links
7	Ping.fm		2008	Post to multiple social networks simultaneously.
8	Posterous		2008	Simple blogging platform
9	Scoop		2007	Resource for news-makers
10	ShareThis		2008	An all-in-one widget that lets people share any content on the Web
11	ShareThis		2008	Share any content on the Web
12	Taboola		2006	Content discovery widgets
13	Tumblr		2007	Post multimedia and other content to a short-form blog
14	WebRSS		2007	RSS to HTML - Display RSS for Free with Web RSS
15	Zemanta		2008	Real-time bidding (RTB)

The Resource Description Framework (RDF)

It is a family of W3C specifications of metadata data model. The general method for conceptual description or modeling of information that is implemented in web resources using a variety of syntax notations and data serialization formats. It was stated in the year 1997 in the base standards of Uniform Resource Identifier (URI) and Published by W3C Recommendation. Not only RDF but some other related standard web tools like Resource Description Framework Schema (RDFS), Web Ontology Language (OWL), Rule Interchange Format (RIF) and Resource Description Framework in Attributes (RDFa) are also helpful for maintain the web feed.

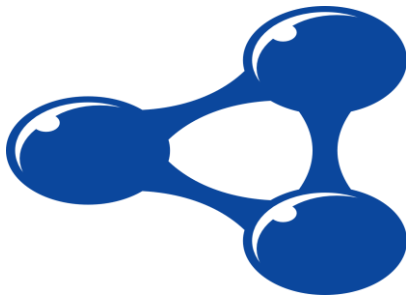


Figure.1 Resource Description Framework (RDF)

RSS Feed Creator is a program to create and maintain our own RSS current feeds RSS and podcasts. The web developers recommend that for optimal crawling, they recommend using both XML sitemaps and RSS/Atom feeds. XML sitemaps will give information about all of the pages on the site. RSS/Atom feeds will provide all updates on the site and helping to keep our content fresher in its index.

Content Syndication Tools

Content syndication is a type of content marketing tools that allows us to push our content to other publishers or websites while we still get to keep the rights of that publication. It is a way to drive traffic to our blog from sources that have already matured in terms of frequent visitors.

Figure-2 shows that the Content Syndication Tools generate the result based on their 4 levels namely – Create, Approve, Distribute and Archive.



Figure.2 Content Syndication Tools

Table-3 highlights that the Effective Content Syndication Tools. Out of 15 tools the features are focus on their products. Almost all the products begin in the year 2004 to 2008.

Compilation of Atom and RSS Feed

The Content Syndication is a mechanism using which the contents of a website including articles, news, blogs and forums are published partially or fully to other websites in a specific format. RSS and Atom are the two main standards of web syndication (Saksoft, 2016).



Figure.3 RSS vs. Atom

Table-4 highlights that the RSS has been the standard for web feeds for a considerable time. The advent of an Atom syndication standard was a response to the design flaws of the RSS standard, an Atom is an Internet Engineering Task Force (IETF) standard while RSS is not. The Atom feed explicitly indicates the content while the browser is left to figure out whether the RSS feed contains plain text or escaped HTML. The Atom code is modular and reusable while RSS code is not. The RSS still holds dominance in the syndication format due to its head start and popularity.

Table.4 Compilation of Atom and RSS Feed

Features	RSS	Atom
File extension	.rss or .xml	.atom or .xml
Media type identification	application/rss+xml	application/atom+xml
Extension to namespaces	Not Supported	Supported
Payload content support	Plain text and escaped HTML	Plain text, escaped HTML, XHTML, XML, Base64-encoded binary and references to external binary content
Content type identification	Not available; cannot identify if the content is plain text or escaped HTML	Explicit identification of content is supported
Date formats	Feed creation or last updated date	Website last updated date
Internationalization	Language context at the feed level	Language context at every individual element level
Modularity	Vocabularies not usable in other XML vocabularies	Vocabularies reusable outside the context of the feed
Robustness	Easy	Rigid
Ease of aggregation	Complex	Easy
Popularity trend	Steady	Increasing
Request for Comments	822	3339
Feed format	RSS being an older feed format, has many versions available.	Atom being new, has relatively less versions
vocabulary elements	RSS vocabulary elements are generally non reusable in some other XML vocabularies.	Atom does away with this problem because it's syntax allows elements to be used again outside the context of an Atom feed document.
Play load	Either contain plain text or escaped HTML. No way to inform the user that exactly which of the two are being provided	Label the content it is providing. Bears content of a variety of formats as plain text,escaped HTML, XML, XHTML etc and also provides references for other contents as audio, video, documents.
Auto discovery' feature	Has the feature but is not as smooth.	Allows a browser to become aware of its presence
Feeds Parts	Only one part summary	Two parts - summary and content.
Vocabulary	Distinct language for a feed	Standard xml:lang attribute
Vocabulary elements	Non reusable	Syntax allows elements
Elements	Not generally reusable	Reused outside the context

Web syndication

Web syndication is a form of syndication in which content is made available from one website to other sites. Most commonly RSS are made available to

provide either summaries or full renditions of a website's recently added content. It is a simple Hyper Text Transfer Protocol based protocol for creating and updating web resources.

Table.5 Web syndication tools











Sl.No	Name	Emblem	Launched	License	Free	ATOM	Podcasts
1	ARA		2007	GPL	√	√	√
2	Dapper		2005	Proprietary	X	X	X
3	Easy Feed Editor		2009	GPL	√	√	√
4	Feed43		2006	Proprietary	√	X	X
5	FeedFire		2007	Proprietary	X	X	X
6	FeedForAll		2004	Proprietary	X	X	√
7	RSS Builder		2005	GPL	√	X	X
8	RSS Edit		2006	Proprietary	X	X	X
9	RSSme		2015	Proprietary	√	X	X
10	WebRSS		2007	Proprietary	√	√	X

Table 5 shows that the Web syndication tools available in the internet. Out of 10 tools 6 tools are free and 3 are licensed by GPL and remaining 4 tools are Proprietary. The Atom and Podcasts features and functions are available only 4 Web syndication tools.

Conclusion

RSS is a portal content language, lightweight syndication format, content syndication system and a metadata syndication framework. Although RSS is in widespread use, people struggle with its confusing and sometimes conflicting documentation and versions. Content Syndication with RSS is the first book to provide a comprehensive reference to the specifications and the tools that make syndication possible. The Content Syndication with RSS offers loggers, web developers and the programmers who support them a thorough explanation of syndication in general and RSS in particular. XML-based feeds of their content, as well as developers who want to use the content that other people are syndicating. This article explores and explains metadata interpretation, different forms of content syndication and the increasing use of web services in this field and also focus on how popular RSS and Atom feed syntaxes can be used to create metadata related tools, syndicating linked data content in typical web applications.

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