

More With Less Using RSS

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ABSTRACT

Today, many receive information via RSS, an efficient delivery and aggregation technology that feeds user-specific web content to our computers. For an individual, RSS is like having an assistant available to gather the information you want to see from a variety of sources. For businesses, RSS can be an effective mechanism to reach customers and provide them with the information they have asked for. While there is tremendous growth in the usage of RSS, surprisingly, many of us know little about what it is.

INTRODUCTION



ephemeralization is a term coined by Buckminster Fuller that refers to the ability to accomplish more with less using increasingly efficient methods and technologies (Heylighen, 1998). An evolving technology that illustrates the essence of ephemeralization is RSS.

Just as newspaper columns can be syndicated and published in other newspapers, website content can be syndicated and published on other websites. “Really Simple Syndication,” “Resource Description Framework (RDF) Site Summary,” and “Rich Site Summary,” are all terms that have shared the acronym RSS and have referred to technology that facilitates the sharing, or syndication, of website content by subscription. RSS, more specifically RSS feeds, reduce the effort and time required to access web content by allowing users to subscribe to specific web sources that generate or that link to content they desire. The subscribers use personalized start pages or RSS readers to display summaries of the content which are updated automatically as new information becomes available. In essence, RSS sustains the notion of ephemeralization by affording subscribers the ability to review greater quantities of specific information in less time than individually visiting each site and searching for the desired information.

Usually, any technology or service that is free and helps save time, and money, does not go unnoticed for very long. For RSS, this is only partially true. Information feeds are increasingly common on web sites and we should expect more web content in the future to be syndicated and available for “pulling” by RSS readers. “If the content is of an ‘episodic nature,’ someone has probably created or is about to create an RSS feed for it” (Fichter, 2004). Educational institutions, such as Harvard University, and reputable news organizations such as The New York Times, CNN, the Boston Globe, the Washington Post, Reuters and the Associated Press all provide RSS feeds for subscribers. Additionally, significant blog content is available via RSS.

Despite its growing popularity, the awareness of RSS is still low among Internet users. According to a recent survey by Yahoo!, 31% of US Internet users consume RSS website content, but only 4% were aware that RSS is the enabling technology; the other 27% were deemed “unaware RSS users” (Bellmont, et al, 2005).

Surely, the growing volume of syndicated web content alone will aid the unaware and attract the uninitiated to RSS technology. RSS awareness is also being aided by Microsoft’s adoption for Internet Explorer 7 of the  icon that Firefox uses to represent RSS and syndication (<http://blogs.msdn.com/rssteam/archive/2005/12/14/503778.aspx>). This could make the orange square with white radio waves the industry standard for RSS and give some iconic consistency to a technology that is represented by numerous icons of various shapes and colors.

BACKGROUND

The variety of icons representing Really Simple Syndication today may account for some of misunderstanding of RSS. However, this confusion can also be attributable to the various specifications and formats associated with the syndication of website content. In 2002, there were at least seven different versions and two different formats of RSS (Pilgrim, 2002). Some of these are considered informal specifications, such as RSS 1.0 and 2.0, and some are considered standards, such as Atom (Nottingham, 2005).

Netscape originally introduced RSS 0.90 in March 1999 as the technology associated with its My Netscape Network that allowed participants to channel website information to their portal, My.Netscape.com. Because RSS 0.90 relied on the Resource Description Framework (RDF), a framework for describing and interchanging metadata (Bray, 2001), it was also known as “RDF Site Summary.”

A few months later, Netscape introduced RSS 0.91 and re-dubbed it “Rich Site Summary.” RSS 0.91 was based on eXtensible Markup Language (XML) rather than RDF because RSS 0.90 was considered too complex. Soon after, Netscape quit the portal business and RSS 0.91 was adopted by Userland Software. A parallel RSS development effort was initiated by the RSS-DEV working group. Their version of RSS was grown from the RSS 0.90 specification and the RDF framework. In August, 2000, the RSS-DEV group announced RSS 1.0. In the meantime, Userland’s Dave Winer continued the development of RSS 0.91, creating versions 0.92, 0.93, 0.94, and eventually RSS 2.0 which he referred to as “Really Simple Syndication” (Pilgrim, 2002; Winer, 2004).

Winer froze the specifications for RSS 2.0 and gave the copyright to Harvard University. This effectively assured that future changes to the specification would be done under a different name. As a result, another syndication format, called “Atom” was introduced. Unlike RSS 1.0 and RSS 2.0, which are informal specifications, “Atom” was issued as a proposed “internet official protocol standard” by the Internet Engineering Task Force (Nottingham, 2005). Table A1 in the Appendix provides a summary by Mark Pilgrim of the various RSS versions and gives his recommendations for their use.

Fortunately, a practical understanding of RSS does not depend on the nuances of its various versions, nor does a single RSS specification seem to dominate the web content syndication space. Therefore, we use the terms “Really Simple Syndication” and “RSS” generically, and describe it as a technology that allows web content providers to automatically share, or syndicate, their web content to consumers who subscribe to that content. From the provider perspective, RSS is potentially “... one of the most important developments in the distribution of media content in a number of years” (MediaThink, 2004).

From the consumer perspective, RSS may be one solution that can help address the issue of information overload. The existing volume of information available on the World Wide Web is already overwhelming to many of us. The situation becomes particularly acute for those time-challenged individuals who are professionally and/or personally compelled to comb the growing number of websites that harbor potentially pertinent information. RSS allows subscribers to “pull” pertinent web content to their computers automatically as new information is made available on websites that provide RSS feeds.

HOW RSS WORKS

An RSS transaction involves a provider and a consumer, or subscriber, of website content. The currency of an RSS transaction, however, is the headlines, story excerpts and links to website content, organized as an RSS feed. The subscriber to an RSS feed uses an application called a newsreader, or aggregator, that periodically checks the RSS file on the provider’s website for content updates. If there is an update, the aggregator “pulls” the headlines and story excerpts of the new content to the subscriber computer along with a hyperlink to the full content, which may be on the provider’s website or on a website elsewhere. If the content is located on another website, the provider is ‘really simply syndicating’ this content. Figure 1 provides a graphical representation of RSS transactions.



Figure 1 – A Graphical View of RSS Transactions

RSS has different versions and formats but essentially, those currently in use are applications of XML. XML is a markup language, like HTML (HyperText Markup Language), that grew out of the SGML (Standardized General Markup Language). XML, however, is a subset of SGML while HTML is an application of SGML. The significance is that HTML's growth is inherently limited while XML is 'extensible' and capable of creating applications such as RSS.

The XML code shown in Figure 2 is a simple example of an RSS feed created with a text editor such as Notepad. The <channel> tag in an RSS feed is similar to the <body> tag in HTML in that all of the RSS data is contained within the channel; just as there is only one <body> in an HTML document, there is only one <channel> in an RSS feed. The <title>, <link> and <description> tags immediately following the <channel> tag are descriptors of the channel and typically provide a website title, URL, and description of the RSS feed. The <channel> can have many <item>s. Each <item> tag denotes new content in an RSS feed; the <title> displays the content headlines; the <link> provides a link to the content; and <description> provides the story excerpt.

Figure 2 – The XML Code of an RSS Feed

```
<?xml version="1.0" encoding="UTF-8" ?>
<rss version="2.0">
<channel>
<title>Easton, George - 7pm</title>
<link>http://rohan.sdsu.edu/~geaston/easton3.xml</link>
<description>This is an RSS feed created by George Easton</description>
<language>en-us</language>
<item>
<title>George Easton Web Page</title>
<link>http://rohan.sdsu.edu/~geaston/7pm180.html</link>
<description>This is a web page by George Easton..</description>
</item>
<item>
<title>IDS180 Grade Calculator</title>
<link>http://rohan.sdsu.edu/~geaston/grade_calculator.html</link>
<description>You can use this interactive spreadsheet to..</description>
</item>
<item>
<title>Time Card Calculations - Assignment 4</title>
<link>http://rohan.sdsu.edu/~geaston/TimeCard_assignment4.htm</link>
<description>This is an example of assignment 4.</description>
</item>
</channel>
</rss>
```

RSS AGGREGATORS/NEWSREADERS

The aggregator or newsreader is the consumer/subscriber application that periodically checks the RSS feed for new content. There are a variety of newsreaders/aggregators available today. Some are operating system specific, some are web-based, and many are free. A partial list of the aggregators and newsreaders that are popular today appears in Table 1. Currently, one of the most popular web-based aggregators is the one embedded in the portal MyYahoo! (Bellmont, et al, 2005).

Table 1: Partial List of Aggregators/News Reader

Windows	Mac OS X	Web-based
AmphetaDesk	AmphetaDesk	Bloglines
Awasu	NetNewsWire	Feedster
FeedDemon	Newsfire	GoogleReader
Newz Crawler		MyYahoo!
Internet Explorer 7		MyMSN
		Newsburst
		NewsGator
		Pluck

Once an aggregator is installed or accessed, the subscriber can begin to subscribe to RSS feeds. While each aggregator has features that make it appealing, it is difficult to recommend one particular aggregator over another simply for functional reasons. One may have a preference for a web-based newsreader, such as MyYahoo!, over an installed application that can read RSS feeds, such as Firefox or Internet Explorer 7. Generally, most aggregators today are capable of the most popular syndication formats (RSS 0.91, 1.0, 2.0 and Atom). For a demonstration of how aggregators work, see Andy Wibbels' demonstration of GoogleReader, Google's RSS reader currently in beta testing (http://andywibbels.com/flash/google_reader.htm). This demonstration can be used to benchmark the features of today's aggregators.

RSS TODAY

There has been tremendous growth in the number of available RSS feeds in the last few years. Syndic8.com, one of the leading RSS feed directories on the web reported approximately 450,000 worldwide feeds in February 2006. This was nearly ten times the number of feeds available at the same time in 2004 (Barr & Kearney, 2006). Many of these feeds can be attributed to blogs. Bloggers seemed to be the first to understand the ephemeralization associated with RSS, especially the efficiency of RSS to alert their readers to new blog content.

Lately, businesses have begun to realize the value of RSS. Marketing departments, for example, are turning to RSS as their email campaigns become less effective. Apparently many of us are reducing our intake of commercial email, in part because organizations are increasingly relying on spam blockers to filter unsolicited email. RSS avoids spam filters and other delivery threats because recipients have to opt-in, or subscribe, to RSS content. RSS provides other business benefits as well. For example, RSS generally makes information timelier as subscribers are notified of new content at regular intervals. Since this new content comes to the consumer, rather than the consumer going to the content, more content can be consumed. RSS effectively gives marketers another channel to build brand awareness. Perhaps this is the reason Northrip considered RSS today as "the most powerful marketing tool emerging in internet publishing today" (Northrip, R., 2003).

RSS has also been adopted by project teams to facilitate communication among team members. Assignments and project updates can be fed to team members via an RSS channels specifically set up for the project. Additionally, many of the collaborative activities of a project are benefiting from the communication efficiencies and security provided by RSS compared to multi-recipient email. For example, Basecamp, a web-based project management tool, uses RSS to share and syndicate project documentation such as design documents and status reports.

As businesses increasingly realize the benefits of RSS, we can expect continued growth in the number and variety of RSS feeds. Really Simple Syndication was undoubtedly not the technology Buckminster Fuller had in mind when he coined the term *ephemeralization*. However, businesses seem to be accomplishing more with less using RSS.

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APPENDIX

Table A1: RSS Versions and Recommendations

Version	Owner	Pros	Status	Recommendation
0.90	Netscape		Obsoleted by 1.0	Don't use
0.91	UserLand	Drop dead simple	Officially obsoleted by 2.0, but still quite popular	Use for basic syndication. Easy migration path to 2.0 if you need more flexibility
0.92, 0.93, 0.94	UserLand	Allows richer metadata than 0.91	Obsoleted by 2.0	Use 2.0 instead
1.0	RSS-DEV Working Group	RDF-based, extensibility via modules, not controlled by a single vendor	Stable core, active module development	Use for RDF-based applications or if you need advanced RDF-specific modules
2.0	UserLand	Extensibility via modules, easy migration path from 0.9x branch	Stable core, active module development	Use for general-purpose, metadata-rich syndication

From "What is RSS?" by Mark Pilgrim, December 18, 2002. Retrieved from <http://www.xml.com/pub/a/2002/12/18/dive-into-xml.html>

NOTES