

# Really Simple Syndication (RSS)

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## INTRODUCTION

E-mail has been one of the major reasons for the broad acceptance of the Internet, and although e-mail is still a vitally important communication tool, it suffers from an increasing number of problems as a medium for delivering information to the correct audience in a timely manner. The increasing volume of spam and viruses means that e-mail users are forced into adopting new tools, such as spam-blocking and e-mail-filtering software, that attempt to prevent the tirade of unwanted e-mails. Many users are also becoming increasingly reticent to divulge their e-mail address for fear of an impending spam influx. Further to this, recent studies suggest that up to 38% of bona fide e-mail messages are being erroneously blocked by filtering software. In reality, this means that more than a third of e-mails, newsletters, special offers, and event announcements are not reaching their intended audience (Patch & McKinlay-Key, 2004). Therefore, the combination of e-mail issues, such as the increasing difficulties associated with multimedia downloads, such as delays, compression, and data integrity maintenance, could be seen as creating a demand for an alternate, effective, and secure communication methodology. One such alternative technology is Really Simple Syndication (RSS), previously known as Rich Site Summary. RSS allows some elements of Web sites, such as headlines, to be transmitted in unembellished form. When devoid of all elaborate graphics and layouts, such minimalist headlines are quite easily incorporated into other Web sites. In other words, third-party Web sites can insert this content on their site through embedded RSS news readers and thus, provide active news feeds quite easily to their clientele. RSS, termed a lightweight content syndication technology, offers many advantages over streaming and e-mail, and for the consumer, no more difficult to access as the RSS readers are akin to e-mail clients (Byrne, 2003). There is no question that the media is keen to adopt a new communications option, and RSS most certainly can comply.

RSS solves a myriad of problems Web masters commonly face, such as increasing traffic, and gathering and distributing news (BBC, 2008). RSS can also be the basis for additional content distribution services (Kerner, 2004). The real benefit of RSS, apart from the added benefit of receiving news feeds


from multiple sites, simultaneously, in the viewer, is that all the news feeds (i.e., news items) are chosen by the user. With thousands of sites now RSS-enabled and more on the way, RSS has become perhaps one of the most visible Xtensible Mark-up Language (XML) success stories to date. RSS formats are specified using [XML](#), a generic specification for the creation of data formats. Although RSS formats have evolved since March 1999, the RSS icon () first gained widespread use in 2005/2006. RSS democratizes news distribution by making everyone a potential news provider. It leverages the Web's most valuable asset, content, and makes displaying high-quality relevant news on a site relatively easy (King, 2004). It must be recognized, however, that RSS cannot entirely replace the primary function of e-mail, which is to provide person-to-person asynchronous communications, but it does compliment it in some interesting ways.

## BACKGROUND

RSS can be found as an acronym for, *Rich Site Summary*, *Resource Description Framework (RDF) Site Summary*, or indeed *Really Simple Syndication*, the latter is used here (Oasis-open, 2004). The RSS format was created to facilitate “channels” on Netscape Netcenter (Netscape, 2005), and was made available to the general public in March of 1999. Channels were a “pull” type mechanism where users requested certain information from various channels. The original RSS, version 9.0, was created by Netscape as a method of building portals to major news sites for news headlines. Portals are Web sites dedicated to specific topics. It was, however, soon replaced by the 0.91 version that stripped out many of the less important features, as Netscape believed 0.90 proved simply too intricate for this undemanding task. The newly established 0.91 itself was promptly dropped by Netscape as their interest in the portal-making business declined. The now obsolete 0.91 was swiftly adopted by the competition, UserLand Software, and employed as the foundation for all its Web-based concepts. Shortly after this, RSS version 1.0, a new version based on Resource Description Framework (RDF), was developed by a third-party spin-off, a group of designers who built their version modeled closely on the concepts and framework of the initial, original 9.0 (prior to its

simplification into version 0.91). The Resource Description Framework (RDF) integrates a variety of applications from library catalogs and worldwide directories to syndication and aggregation of news, software, and content to personal collections of music, photos, and events, using XML as an interchange syntax. The RDF specifications provide a lightweight ontology system to support the exchange of knowledge on the Web (Nilsson, 2001; Van der Vlist, 2001). As a result of this, Userland, indignant at being omitted from the latest increment, ignored version 1.0 and continued to advance their own brand of RSS, developing versions 0.92, 0.93, 0.94 through to their current 2.0. In reality, this means there are seven different formats to contend with. A feed aggregator, also known as a feed reader, news reader, or simply as an aggregator, is client software or a Web application that aggregates syndicated Web content, such as news headlines, blogs, podcasts, and vlogs in a single location for easy viewing (Wikipedia, 2008). Aggregators must be flexible and comprehensive, and must be able to recognise and deal with all versions. RSS version 2.0 is currently offered by the Berkman Centre for Internet and Society, at Harvard Law School.

## **REALLY SIMPLE SYNDICATION (RSS)**

RSS has rapidly developed into a prevalent means of sharing content between Web sites. Many sites already use RSS, and as word spreads, new sites incorporate this feature into their sites daily. RSS looks set to become a dominant force. Numerous news sites, including BBC, Yahoo! and Wired, currently use RSS to provide their subscribers with the latest headlines. Indeed the Web sites of many mainstream “giants” also incorporate RSS in a bid to keep their subscribers notified of announcements, events, and advertisements. As yet, only sites that currently offer news in RSS format may be read using a news aggregator. To ascertain if a site utilizes RSS is generally simple. Sites make no secret of the fact and proudly display RSS feed pictograms, such as (“

An RSS text file contains both static and dynamic information. At a high level, an RSS document is an rss element, with an obligatory attribute called version, this attribute specifies the version of RSS that the document conforms to. Here an element is a piece of data within a document that may contain either text or other subelements describing the RSS data. Succeeding the rss element is a single channel element that contains information about the channel

(metadata) and its contents. Metadata is commonly defined as “data about data” or data describing context, content, and structure of records and their management through time. A channel may, in turn, contain any number of items. Items are subelements that are enclosed in matching XML start and end tags, and appear as subelements of channel, listed before the closing/channel tag. Each item is identified with an opening item tag, and concluded with a closing/item tag. All child elements of an item are optional, however, at least one element must be present, either title or description. An item may be a snippet of information that represents a larger article, much in the same way as a headline represents a newspaper article. If this is the case, the item’s description is a synopsis of the story, and the link points to the full story. An item may also be complete in itself; if so, the description contains the full text, and the link and title may be omitted. In this way, an RSS channel can contain many items that, in turn, may incorporate many differing subelements. When design and coding is complete, the validated RSS file can be registered with various aggregators, allowing the feed to be “sucked up” by discerning subscribers. Any amendments or updates made to the RSS file will automatically be relayed to all subscribing clients.

## **RSS Enclosures**

RSS version 2.0 encompasses a powerful feature; it allows an item to have an enclosure. This can, in simplistic terms, be likened to an e-mail having an attachment. In reality, enclosures hold huge potential, and represent another step in the evolution of content syndication (Kerner, 2004). By incorporating an enclosure subelement into an item, any RSS element can then describe a video or audio file. The enclosure feature has three attributes, the first, “url,” says where the multimedia file is located, the second “length” determines the size of the file in bytes, and the last “type” describes the Multipurpose Internet Mail Extension (MIME) type of the multimedia file. In this way, an aggregator can determine the payload attributes prior to any communication, and can then apply the appropriate scheduling and filtering rules.

Primarily, the most attractive feature of RSS is that it enables information from numerous Web sites to be viewed simultaneously, all on one page; consequently, numerous sites can be scrutinized in seconds rather than having to be tediously downloaded independently. A free newsreader is *RssReader*. Like other aggregators, the *RssReader* aggregator can sustain numerous channels, scouring each of the user’s designated Web sites for updated feeds at regular intervals. When *RssReader* gathers updated headlines from the various sites, it displays an amalgamation of such in a list box positioned in the bottom right of the user’s desktop (see Figure 1; which displays headlines from Yahoo’s entertainment news feed).

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