



RSS - A Primer for Publishers & Content Providers



Document Details

<i>Author(s)</i>	Malcolm Moffat
<i>Last Updated</i>	20/08/03
<i>Version</i>	1.0
<i>Document Title</i>	RSS - A Primer for Publishers & Content Providers
<i>Web Version</i>	http://www.eevl.ac.uk/rss_primer/

Contents

1. Aims & Scope	3
2. Why Should Publishers & Content Providers Produce RSS?	3
3. What is RSS?	4
3.1 RSS Fundamentals	4
3.2 What does an RSS File look like?.....	4
3.3 RSS in Action	6
3.3.1 Example RSS at the BBC	6
3.3.2 Try a Simple Web based RSS Aggregator.....	7
3.3.3 Try a Desktop RSS Reader	7
4. RSS - Common Questions Answered	8
5. Identifying Suitable Content	9
6. Producing RSS	11
6.1 Overview	11
6.2 Illustrative Case Studies	11
6.2.1 Case Study - RSS via an Online Editor.....	11
6.2.2 Case Study - RSS Generation from a Database.....	12
7. RSS - Technical Pointers & Web Resources	14
7.1 RSS Specifications	14
7.2 RSS Tutorials & Tools	15
7.3 RSS Validators	15
7.4 RSS Discussion Groups	16
7.5 Further Reading.....	16
8. Good Practice Recommendations	17
9. Promoting, Discovering RSS Feeds	18
10. Utilising RSS Feeds	19
11. References and Notes	19
Appendix 1 Example RSS 1.0 File	20
Appendix 2 Example RSS 2.0 File	22

Acknowledgements

These guidelines have been produced by EEVL, the Internet guide for engineering, mathematics and computing, as part of a JISC funded PALS Metadata & Interoperability project which aims to encourage the sharing of news and alerts in machine readable formats.

Thanks go to our project partners (Centaur Communications, Pro-Talk Ltd and Gojobsite) for their input and to Andy Powell and Paul Miller of UKOLN for their valuable comments and feedback.

Further information about EEVL, JISC, PALS and the project partners can be found on their websites at

EEVL: The Internet Guide to Engineering, Mathematics and Computing

<http://www.eevl.ac.uk/>

JISC: The Joint Information Systems Committee

<http://www.jisc.ac.uk/>

PALS Metadata & Interoperability Projects

http://www.jisc.ac.uk/index.cfm?name=programme_pals

Centaur Communications

<http://www.centaur.co.uk/>

Pro-Talk Ltd

<http://www.pro-talk.com/>

Gojobsite

<http://www.gojobsite.co.uk/>

UKOLN

<http://www.ukoln.ac.uk/>

1. Aims & Scope

This document is aimed at **publishers** and **content providers** with the intention of introducing & explaining the concepts behind RSS and addressing some commonly expressed concerns. It is primarily intended for a non-technical audience who require an overview of RSS in order to allow them to make decisions regarding the possible use of the technology. However, the guidelines do provide recommendations for good practice, case studies on RSS production and links to tools and specifications which will provide useful starting points for those tasked with actually producing RSS feeds.

2. Why Should Publishers & Content Providers Produce RSS?

In a nutshell RSS allows potential users to **see some of your site's content** without them actually having to visit it directly. Although at first glance this might not seem like the ideal way to encourage visitors it can actually **vastly improve your site's visibility** and **reach** by making content available in a more convenient manner. As Nottingham [1] explains;

"Imagine that your company announces a new product or feature every month or two. Without an RSS feed, your viewers have to remember to come to your site and see if they find anything new - if they have time. If you provide a feed for them, they can point their aggregator or other software at it, and it will give them a link and a description of developments at your site almost as soon as they happen. News is similar; because there are so many sources of news on the Internet, most of your viewers won't come to your site every day. By providing an RSS feed, you are in front of them constantly, improving the chances that they'll click through to an article that catches their eye."

The main benefits of creating an RSS feeds include;

- RSS is an excellent and cost-effective way of **driving traffic** to, and **increasing brand awareness** of, any website that publishes content (e.g. news, jobs, events) regularly. Once a publisher produces an RSS file, they are enabling others to syndicate their headlines, without any further work on their part.
- RSS is the **dominant format** for distributing headline content on the Web.
- RSS allows **easy sharing** of data between sites. Webmasters can use an RSS file to easily incorporate third party content into their own site.
- Content from RSS feeds can be **easily repurposed** allowing, for example, cross searching of a number of different feeds at once.
- RSS content can be added to **personal desktop news reading applications** like FeedReader or AmphetaDesk.

RSS is now being used by literally thousands of sites both large and small. Over 20,000 feeds are listed at Syndic8 (www.syndic8.com) including those from thousands of small organisations and many larger ones (including BBC, CNN, NASA, Moreover, Wired etc). There has been a large increase in the number of feeds available. Increasingly, large industry players such as Microsoft are providing their products with RSS aggregator facilities.

3. What is RSS?

"Before you go any further realise this: RSS is really simple" [2]

Put simply RSS is a format for **easily sharing content** on the web. What type of content? Commonly things such as news items, job adverts, or marketing communications are ideal candidates for RSS although almost any list orientated information can be suitable.

3.1 RSS Fundamentals

Some key points to be aware of from the outset include:

- The use of RSS **benefits everyone** involved - for publishers and content providers details of new content can be accessed by a much broader audience, for web site producers new content can be easily integrated into web sites or portals, and for end users easy access to new content is greatly facilitated.
- An RSS file (also known as an RSS feed or **RSS channel**) consists of a **list of items**, each of which contains a **title**, **description** and a **link** to a web page. Typically the full content itself is made available separately and can be accessed by the link in the RSS file.
- Utilising an RSS feed is straightforward. Once an RSS file is made available on a web site, interested parties can simply gather the file from the site and **reuse the content** in a variety of ways.
- There are a number of **different versions** of RSS. Although this has led to some confusion and debate it is not a major issue as almost all RSS applications can handle any RSS version.
- RSS can stand for '**Rich Site Summary**', '**RDF Site Summary**' or '**Really Simple Syndication**' depending on who you ask and which version they are speaking about.
- RSS is an **XML based format**. If you already know a bit about HTML and XML then RSS will be a breeze!

The terms **Syndication** and **Aggregation** are often used in the context of RSS. Dictionary definitions of 'syndication' are along the following lines;

'Distributing a news article or picture through a syndicate for publication in a number of newspapers or periodicals simultaneously'

'*Syndication*' is often used in the context of RSS because it is all about distributing content for reuse.

Because RSS is an XML format and not simple HTML, RSS files must be processed (or '*parsed*') before they can be displayed. RSS aggregators are applications which provide the means to read the content of RSS files. Some of these aggregators are web based (e.g. NewsIsFree, Daypop) others are programs which can be downloaded and used on the desktop as standalone programs (e.g. FeedReader, Amphetadesk). Aggregators are also being developed to allow feeds to be read in a number of commonly used applications such as web browsers and email clients.

3.2 What does an RSS File look like?

Exactly what an RSS feed looks like will depend on which version of RSS is being used but at the most basic level a feed consists of a **channel** with its own attributes (e.g. title, description, URL, creation date etc) and a number of **items** each with their own attributes (e.g. title, description, URL etc). A schematic diagram outlining the basic structure of an RSS file is illustrated below:

```

<?xml version="1.0"?>

<channel>
.....
</channel>

<item>
.....
</item>

<item>
.....
</item>

<item>
.....
</item>

.....More Items

```

The information enclosed between the <channel> tags is used to describe the feed itself. The code snippet below illustrates a typical channel description.

```

<channel>
<title>BBC News | UK | UK Edition</title>
<link>http://news.bbc.co.uk/hi/uk/default.stm</link>
<description>BBC UK News updated every minute of every day</description>
</channel>

```

Each item in the RSS feed is described between <item> tags and at the most basic level these include title, links and descriptions as illustrated below.

```

<item>
<title>Clare Short quits post over Iraq</title>
<description>Clare Short quits the cabinet, accusing Tony Blair of breaking his promises over the UN's role in rebuilding Iraq.</description>
<link>http://news.bbc.co.uk/hi/uk_politics/3019871.stm</link>
</item>

```

Icons are sometimes used by webmasters to link to RSS files although there is little standardisation on the actual icons used - the colour, text and size may vary from these illustrated below.



3.3 RSS in Action

The benefits of RSS are perhaps best illustrated by observing how others have used the format and actually trying out some RSS aggregators and readers. To that end this section provides details of the following;

- a) An example of how RSS is used at the BBC to allow some of their content to be included in other websites and services.
- b) An example of a simple web based aggregator service.
- c) Details of desktop RSS readers. These are small stand alone applications that can be downloaded from the web and used to read RSS channels.

3.3.1 Example RSS at the BBC

The BBC News Service produces a number of different RSS feeds for a variety of their content including;

BBC - World News at

http://www.bbc.co.uk/syndication/feeds/news/ukfs_news/world/rss091.xml

BBC - UK News at

http://www.bbc.co.uk/syndication/feeds/news/ukfs_news/uk/rss091.xml

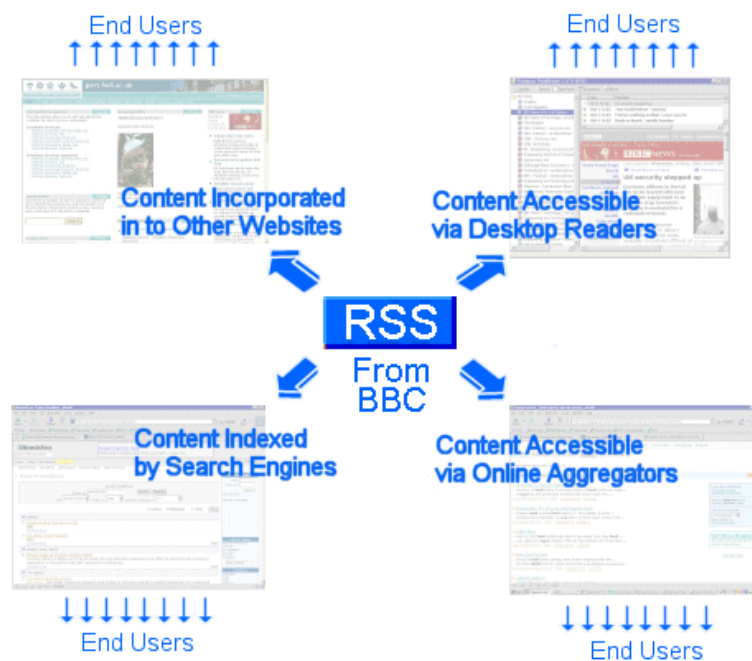
BBC - Front Page at

http://www.bbc.co.uk/syndication/feeds/news/ukfs_news/front_page/rss091.xml

BBC - Technology at

http://www.bbc.co.uk/syndication/feeds/news/ukfs_news/technology/rss091.xml

These BBC feeds can be gathered on the web by a variety of third parties who can then utilise the content in a number of ways. Typically by integrating it into their websites, indexing it for searching, making it available to desktop feed readers or via online aggregators. This has the net effect of vastly multiplying the number of end users who may come into contact with the BBC's headlines.



Anyone following one of the links is taken back to the BBC site for the full story. The BBC benefits as their stories are made available to a much wider audience resulting in more visits to their site, and end users benefit as they can be made aware of relevant stories in ways that are convenient to them. It is incredibly easy for an end user to monitor literally hundreds of websites using an RSS aggregator but is very time consuming to monitor the same sites without one.

As one commentator [3] noted;

"This is a smart move on the BBC's part. It means increased traffic and increased visibility for news.bbc.co.uk, because users are able to syndicate BBC headlines to their own sites and read syndicated content via an RSS reader. It's always refreshing to witness a news site that has a clue, technologically."

3.3.2 Try a Simple Web based RSS Aggregator

A basic web based aggregator has been developed by EEVL;

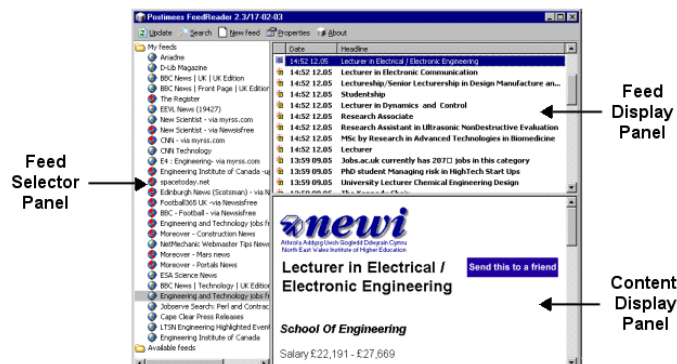
- **Simple Web Based RSS Aggregator - Demonstrator**
<http://www.eevl.ac.uk/php/rssdemo/>

This site demonstrates aggregation at its simplest level. It is possible to select from a list of feeds and subsequently view the individual feeds content. The range of feeds have been arbitrarily selected in order to demonstrate the variety of RSS content which is available. Other more sophisticated aggregators include:

- **Meerkat**
<http://www.oreillynet.com/meerkat/>
Meerkat is a Web-based syndicated content reader which aggregates content from a wide range of science & technology related feeds. By default the service provides a chronological listing of news items - the latest stories being presented first, regardless of their source. It is also possible to select individual feeds or groups of feeds for display and to search across a range of feeds.
- **Linux Portaloo**
<http://www.linux.org.uk/cgi-bin/portaloo>
The Linux Portaloo provides an aggregator service for Linux related RSS feeds. It is possible to view the titles of news items from a range of feeds and the display of feeds can be modified by 'adding' or 'unsubscribing' particular channels.

3.3.3 Try a Desktop RSS Reader

Perhaps the clearest and simplest way of illustrating the benefits and flexibility of RSS is to try a desktop feed reader. A number of readers are currently available and most, but not all, share a three panel layout consisting of feed selector, feed display and content display.



Feeds can be subscribed to, selected and read effortlessly making the power and convenience of monitoring a number of personally selected feeds rapidly apparent.

Readers we have tried and been impressed with include Feedreader (www.feedreader.com) and Amphetadesk (www.disobey.com/amphetadesk/) although a wide array of other readers exist. It should be straightforward to download a reader, install it on your desktop and add a number of feeds of interest. A small list of feeds is provided in section 5 and details of how to find other feeds is provided in section 9.

4. RSS - Common Questions Answered

Content providers may have legitimate concerns about sharing their prized content. Some of the most commonly expressed questions are addressed below.

"If it's all about sharing content why can't we just provide you with a link to our most recent news, jobs, events information?"

Simply providing a link to your content does not allow it to be shared and repurposed easily and in a standard way. The beauty of RSS is that little effort is required for third parties to reuse your content and make it available to their visitors.

"It sounds quite complicated - will it be a lot of work for our techies?"

For those familiar with HTML and XML, RSS will be easy to grasp. There are many ways of producing RSS feeds which range from simple editors which will produce all the code for you to RSS generated automatically from backend databases which will require some technical input. [See section 6 for further details]

"I don't like the thought of giving away our content for others to use."

Usually RSS feeds only contain a headline and brief description of the actual content - just enough to generate interest in potential users. These users will be directed back to your site by links in the feed to get the full content. If you are very worried about giving away any of your content one approach would be to include only a title and URL for each item in the channel. This would mean that potential users would have to visit your site to get any useful information.

"Won't there be a loss of traffic to my site?"

No, the beauty of RSS is that it can actually drive traffic to your site. Users see the headlines describing your content via the feed but actually come to your site to get the content.

"What about branding of my site's content?"

Every RSS channel can include the name, logo, description and search URL of the service that made the channel available. It is reasonable to expect services that use your channel will display this information.

"If I make an RSS channel available, am I losing control over my look-and-feel?"

Yes and no! Yes, you are giving a little of your content away as XML and letting other services present it within their own look-and-feel. However, the overall result should be that more people visit your pages and see the complete content in the way you intended.

"Can I tell who is accessing and using my RSS feeds?"

It is possible to look at the web access statistics from your web server which will give some indication of who is picking up your RSS feeds. However, this is far from the whole picture as a single aggregator could potentially pick up your feed and thousands of end users could, in theory, view the contents with only a single 'hit' to your RSS file. More sophisticated techniques could be employed to help track feed usage, for example adding parameters to the URLs within feeds would allow a webmaster to monitor the hits to a page arising from an RSS channel.

"Does Google index RSS feeds?"

Google does index RSS documents as evidenced by the fact you can limit searches to RSS using the filetype:rss operator while performing a Google search. For example a search of on Google using 'BBC filetype:rss' will result in a number of RSS feeds being retrieved. However Google's indexing of RSS feeds appears to be far from complete. A number of specialist search engines which index only RSS feeds are available including Feedster (www.feedster.com) and Newsisfree (www.newsisfree.com).

"Can we charge for people using our RSS feeds?"

RSS feeds are usually made freely available for any interested parties to use. However it is possible that publishers could decide that a feed could be licensed in some way with only authorised users being given access to the RSS file. Another option is that publishers could make an RSS feed freely available but force users to 'subscribe' in order to gain access to the full details on their site.

"What's the relationship between RSS feeds and Weblogs?"

A weblog (sometimes shortened to 'blog') is a web site of an individual or group that uses a dated log format that is updated on a daily or very frequent basis. RSS is a good format for creating weblogs and the format is used in weblog software such as Radio UserLand.

"Can you include search boxes into RSS feeds?"

Yes. The textinput element allows small text boxes and submit buttons to be included within an RSS Feed. Many but not all RSS parsers support this feature and it can be used to provide functionality such as searching a database or signing up for an email newsletter. Remember though that even if a search box is included in a feed those picking it up may choose not to utilise it.

"Why can't I view an RSS file in my web browser?"

Web browsers vary in their ability to deal with raw RSS files. More recent browsers such as Internet Explorer 5.5+ or Mozilla will allow you to view the actual XML code of RSS files within the browser window. Attempting to view an RSS file with a recent browser should allow you to see the raw XML code. Alternatively the feeds can be read by using a desktop reader as described in section 3

"Can I include symbols and special characters in my RSS feeds?"

Not without great care. Certain characters within XML have special significance (such as <, >," or &) and using them within the text of the feed (e.g. within item descriptions) will cause problems. There are means of including special characters by 'encoding' them within your feed. For example & can be used to include the & character within a feed. Failing to encode symbols and special characters can make a feed unreadable or make it display incorrectly. It is a good idea to use an RSS validator to check that the feeds you are producing are valid.

RSS is truly a win - win for all involved. If you've a concern or question that we've not covered here we'd like to hear it! email webmaster@eevl.ac.uk

5. Identifying Suitable Content

RSS is a very flexible format and can be used to describe just about any kind of online content e.g. news headlines, job adverts, press releases, conference or events announcements. Virtually any list-orientated type of content could be considered as a candidate for an RSS feed and other possibilities might include new book listings, marketing communications, product announcements, service announcements, tender opportunities or web logs. There are many possibilities!

It is better to provide different feeds for each area of content as this will allow those utilising your feeds to target areas of interest more precisely. For example a jobs site might produce a range of feeds for various subject disciplines, and a news related site might produce feeds for different categories of news such as local, national, sports and world news or for different sectors.

The list below provides links to some example RSS feeds which utilise different forms of content.

Specialised Industry News

Engineering News from Moreover

http://p.moreover.com/cgi-local/page?index_engineering+rss

Materials News from Nature Publishing Group

<http://www.nature.com/materials/rss.rdf>

European Space Agency News

<http://sci.esa.int/newssyndication/rss/sciweb.xml>

General News Headlines

BBC - UK News

http://www.bbc.co.uk/syndication/feeds/news/ukfs_news/uk/rss091.xml

BBC Technology News

http://www.bbc.co.uk/syndication/feeds/news/ukfs_news/technology/rss091.xml

Job Adverts

Engineering and Technology jobs from jobs.ac.uk

<http://jobs.ac.uk/rss/1010.xml>

Engineering jobs from Gojobsite

http://www.gojobsite.co.uk/feeds/en_jobs.rss

Engineering jobs from *The Engineer*

<http://www.e4engineering.com/rss/e4rssjobs.asp>

Jobs/Career News

Nature jobs

<http://www.nature.com/naturejobs/rss.rdf>

Science's Next Wave UK

<http://nextwave.sciencemag.org/rss/nwuk.xml>

Press Releases

EEVL Latest News

<http://www.eevl.ac.uk/rss/latest-news.rss>

Cape Clear Press Releases

<http://www.capeclear.com/pr.xml>

Conference/Events Announcements

LTSN Engineering- Highlighted Events Channel

<http://www.ltsneng.ac.uk/rssfeeds/rss091events.asp>

Engineering Institute of Canada - Upcoming Events

<http://www.eic-ici.ca/english/info/channel-info.php3>

Latest Table of Contents

Ariadne Magazine

<http://dois.mimas.ac.uk/rss/ariadne.xml>

D-Lib Magazine

<http://dois.mimas.ac.uk/rss/dlib.xml>

Tenders and Contracts

e4subcon.com Tendering Opportunities

<http://www.e4engineering.com/rss/e4rsstenders.asp>

6. Producing RSS

The scope here is not to provide step by step guidelines as to how to actually produce RSS feeds but to provide some illustrative examples, case studies & recommendations to demonstrate that a range of mechanisms are possible. Hopefully this should guide you in your task of the best means to produce RSS for you. Technical pointers including RSS tutorials, tools and recommended reading are covered in section 7.

6.1 Overview

There are a range of ways, both manual and automated, by which RSS feeds can be produced:

Manual RSS Production

- **Coded by Hand** - This time consuming option is certainly possible if you enjoy typing lots of angled brackets! There is not much to recommend this way of doing things apart from the possible benefit of developing a familiarity with the RSS format.
- **Use an Online Editor** - Online editors exist which can produce an RSS channel simply by filling in an HTML form with no code writing required! Examples include UKOLN's RSSxpress channel editor (<http://rssxpress.ukoln.ac.uk/>) which creates RSS 1.0 feeds and the RSS Channel Editor from webreference (<http://www.webreference.com/cgi-bin/perl/rssedit.pl>) which creates RSS version 0.91 feeds. Once created these feeds can be saved locally and uploaded to a web server for public use.

Automatic RSS Production

- **RSS production from HTML ('Scraping')** - Content produced in HTML format can be converted into RSS by a process known as 'scraping'. Scrapers attempt to automatically identify items suitable for RSS by analysing the markup on a web page. Feeds produced in this way tend to be of lower quality than those tailor made by other means, although scraping can be enhanced by the use of special HTML tags designed to assist scraping programs. MyRSS provides a 'create a channel' service which will produce an RSS feed by scraping the content from any web page. Producing RSS via scraping clearly has some legal ramifications. For instance scraping from pages which are designed to assist scraping programs is likely to be ok, whereas scraping pages without the producers knowledge may well be illegal.
- **RSS generation from a CMS** - If your content is managed by a commercial Content Management System (CMS) then RSS production should be very straightforward as many CMS packages will export data in RSS format.
- **RSS Generation from a Database** - Data stored in a database can provide an ideal starting point for RSS production. There are a range of RSS tools available for a number of different platforms as outlined in section 7.

6.2 Illustrative Case Studies

6.2.1 Case Study - RSS via an Online Editor

The RSS News feed which provides details of EEVLs latest news was produced by using the UKOLNs RSSxpress RSS Channel Editor available at <http://rssxpress.ukoln.ac.uk>. This service can be used to create new channels or modify existing ones. Creating a new channel is a fairly straightforward matter of choosing to create a new feed from the RSS Channel Editor Page and filling in the appropriate fields on the web page. For complete RSS novices the main hurdle to be overcome is working out exactly what to put in each field as no help is provided on the site and some rudimentary understanding of RSS is required to work things out. By a process of trial and error it doesn't take long to get the appropriate information in the right places. Selecting the save option then allows you to save your RSS file locally and it can then be FTP'd to your web server.

Once you've produced a feed in this manner it is possible to modify it again using the RSSxpress Channel Editor. To do this the URL of the feed is entered into the editor which then loads the feed ready for editing. Changes can then be made, for example adding new items to your channel or deleting old ones. When the edits are complete the file is saved locally and FTP'd across to your web server, replacing the older version.

The advantages of producing RSS in this way are that the editor produces valid RSS V1.0 code without you necessarily having to familiarise yourself with the complexities of RSS and RDF. On the downside is the fact that creating RSS in this manner is a manual process and while the editor speeds things up to some degree any changes made to the feed require some human effort. We have found this method suitable for producing a feed which covers ad-hoc news and press releases which are not stored in a database and do not change on a hour to hour basis. More dynamic content would be better dealt with by some means of automated RSS production.

6.2.2 Case Study - RSS Generation from a Database

RSS feeds that provide details of the latest items added to a database can be generated using a scripting language such as Perl, PHP or ASP. At EEVL the feeds which provide details of the latest items added to our Internet Resource Catalogue database are generated dynamically by using PHP. Essentially the process used to create our feeds can be broken down into the following steps;

1. Identify an existing RSS feed which can be used as a template and save it as a text file.
2. Take the 'static' part of the RSS feed i.e. <channel> and <image> tags and modify them so that they describe the feed you want to syndicate.
3. Create print statements (or equivalent) for this part of the RSS e.g.

```
Print'<?xml version="1.0"?>\n\n';
Print '
<rdf:RDF>
<channel rdf:about="">
<title>
MY TITLE
</title>
<link>http://</link>
<description>
MY DESCRIPTION
</description>
</channel>
<image rdf:about="http://">
<title>
MY TITLE
</title>
<link>http:// </link>
<url>http:// </url>
</image>';

//This is where the code for 'items' data is inserted

Print'
</rdf:RDF>';
```

4. Create the query that will retrieve the required data from your database - note that a RSS feed should ideally have fifteen or less items. At EEVL we use a query along the following lines to select the newest fifteen entries in our database;

```
results = 'SELECT
url,
title
description
FROM
database
WHERE
date_created is recent
ORDER BY
Date_created DESCENDING
LIMIT
0,15'
```

5. Insert the code that will iterate through these results and print the <item> tags e.g.

```
Loop_count=1;
WHILE (results){

Print '<item rdf:about=url position="Loop_count">'
Print '<title>'
title
</title>';
Print '<link>'
url
</link>';
Print '<description>'
description
</ description >';
Print '</item>';
increment(Loop_count);
};
```

6. Debug and test with one of the online XML validators such as <http://feeds.archive.org/validator/>
7. If you want to serve your feed dynamically you need to add the line:

```
Print 'Content-type: text/xml\n\n'
```

to the start of your program. Otherwise if you are printing to a file on your webserver you have to make sure that the web server is configured so that it serves your file as text/xml.

7. RSS - Technical Pointers & Web Resources

7.1 RSS Specifications

There are currently multiple versions of RSS in use including RSS 1.0, RSS 2.0 and many deprecated versions. Both RSS 1.0 and RSS 2.0 are being separately and independently developed - RSS 2.0 is **not** a progression of RSS 1.0 despite what the version numbers might suggest. There has been much debate about which of these version is better but both have their own benefits and drawbacks and most RSS applications and tools support both formats. Both formats are based on XML and have general similarities in structure.

RSS 1.0

In this version RSS stands for '**RDF Site Summary**'. RSS 1.0 utilises the Resource Description Framework (RDF) which is the W3C recommendation for metadata. Due to the use of RDF, RSS 1.0 is thought to be more flexible, if more complex than other versions. The specification and supporting materials can be found at <http://web.resource.org/rss/1.0/>

Basic Structure of an RSS 1.0 file

```
<rdf>
  <channel />
  <image />
  <textinput />
  <item />
  <item /> ...more items
</rdf>
```

[see Appendix 1 for an example RSS 1.0 File]

RSS 2.0

In this version RSS stands for '**Really Simple Syndication**' and the emphasis is clearly on simplicity. RSS 2.0 follows on from the various RSS 0.9x specifications (RSS 0.90, RSS 0.91, RSS 0.92, RSS 0.93) and is championed by David Winer of UserLand. Although RSS 2.0 is the current version RSS 0.91 is still the dominant format on the web in terms of the sheer number of feeds. The specification and supporting materials for RSS 2.0 can be found at <http://backend.userland.com/rss>

Basic Structure of an RSS 2.0 file

```
<rss>
  <channel />
    <image />
    <textinput />
    <item />
    <item /> ...more items
  </channel>
</rss>
```

[see Appendix 2 for an example RSS 2.0 File]

7.2 RSS Tutorials & Tools

RSS Tutorial for Content Publishers and Webmasters by Mark Nottingham

<http://www.mnot.net/rss/tutorial/>

This tutorial explains the features and benefits of RSS and gives a brief technical overview of it. The reader is assumed to have some familiarity with XML and other Web technologies. Links to further materials are provided. [note: the tutorial was written in 2002 and describes RSS V 1.0 and RSS V 0.91]

RSS Workshop -Publish and Syndicate Your News to the Web

<http://gils.utah.gov/rss/>

This fairly technical workshop demonstrates how to create, validate, parse, publish, and syndicate RSS channels. The emphasis is on practical application and links to a wide range of tools is provided.

Making Headlines with RSS

<http://www.webtechniques.com/archives/2000/02/eisenzopf/>

Jonathan Eisenzopf explains how his XML::RSS Perl module can be used to create an RSS 1.0 file.

Creating an RSS News Feed with PHP and MySQL

<http://www.lowendmac.com/tech/php16.html>

A brief article which describes how PHP can be used to generate RSS from a MySQL database.

Generating RSS with ASP

<http://www.purplepages.ie/site/articles/article.asp?faq=6&fldAuto=76>

Short article illustrating how Active Server Pages can be used to create RSS from a MS Access database.

A number of further tools are listed at <http://blogspace.com/rss/tools>

7.3 RSS Validators

It is important to validate RSS feeds as the XML they contain must be well formed if they are to be parsed without errors. A number of web based validators exist which allow you to check RSS feeds, including;

Redland RSS 1.0 Validator and Viewer by David Beckett

<http://www.redland.opensource.ac.uk/rss/>

RSS Validator by Mark Pilgrim and Sam Ruby.

Validates RSS 0.91, 0.92, 0.93, 0.94, 1.0, and 2.0, but it is optimised for RSS 2.0 feeds.

<http://feeds.archive.org/validator/>

7.4 RSS Discussion Groups

RSS-DEV

RSS 1.0 discussion group

<http://groups.yahoo.com/group/rss-dev/>

RSS2-Support

RSS 2.0 support group.

<http://groups.yahoo.com/group/RSS2-Support/>

Syndication

Discussion of XML news, announcements, syndication, resource discovery formats

<http://groups.yahoo.com/group/syndication/>

7.5 Further Reading

Hammersley, B. Content Syndication with RSS. O'Reilly UK, 2003

Content Syndication with RSS by Ben Hammersley is an excellent starting point for further information on all aspects of RSS. The book covers the main standards & specifications, details of RSS Modules which can be used to extend the format, and some fairly indepth explanations of how RSS can be created using tools such as the XML::RSS perl module.

Other useful RSS articles include;

Cliff, P. RSS - Sharing Online Content Metadata, Cultivate Interactive, issue 7, 11 July 2002

URL: <<http://www.cultivate-int.org/issue7/rss/>>

Bisson, S. Success with RSS. in SIGS Application Development, Sep 2002

URL: <http://www.appdevadvisor.co.uk/Downloads/ADA6_7/Bisson6_7proofed.pdf>



8. Good Practice Recommendations

Paul Miller [4] makes a number of recommendations for good practice in the use of RSS. These and some other practical guidelines for good practice are summarised below;

- Use the RSS 1.0 specification because of its greater flexibility.
- Validate RSS feeds using an RSS validation tool.
- Ensure that the locations of RSS feeds are persistent, and institute procedures to ensure that they are running and available.
- Maintain one or more feeds with changing content, rather than creating new ones each time there is new content to deliver.
- Restrict RSS feeds intended for embedding in external web sites, portals, etc. to not more than six <item>s.
- Avoid excessively long descriptions of feed items (50 words maximum). Ideally you should provide enough of a description to allow potential viewers to decide whether they should follow the link.
- Ensure that RSS sources are kept fresh with topical and timely content. Archive or delete older material, rather than allowing it to languish at the bottom of the list.
- Understand the purpose of each RSS feed you provide. Provide multiple feeds, rather than diluting the message of one with information irrelevant to its audience.
- Make sure your feeds are visible by registering them with appropriate sites [see section 9].
- Ensure that the content of an item's <title> and <description> make sense when viewed in isolation. This is because not all viewers will display the entirety of a feed so it is wise to provide meaningful, independent titles & descriptions.
- Make sure the language & terminology in your feeds make sense to the widest possible audience - avoid complex jargon and acronyms.
- Write text for entries that is suitable for delivery through a wide variety of display channels, and to audiences not necessarily accustomed to the subject matter.
- Make full use of the subelements of <channel> within your RSS Feed. Using appropriate <title>, <description> and <image> subelements of channel can help to preserve your own branding on content.
- Restrict the size of the logo associated with your channel to images to less than 90 pixels along the longest side.
- Do not include HTML markup in your RSS Feed - i.e. Avoid using tags such as <p> <a href> etc as it is not possible to know how the feed will be presented and including markup can prevent your feed from being correctly displayed.
- Filename extensions with RSS can be anything you like. Most people use a filename with an .xml, .rss, or .rdf extension. The important thing is that your web server is configured to serve RSS files using a mime type of text/xml.

9. Promoting, Discovering RSS Feeds

So you've been convinced of the benefits of RSS and have produced a range of feeds to help you expose your content to a wider audience. How then do you promote these feeds and let potential users know that they are available? The most effective measure is to register your feed with the main RSS directories, aggregators and search engines. These include;

- **Syndic8**

<http://www.syndic8.com/>

Syndic8 provides the largest directory of RSS channels with over 25,000 feeds listed. As well as allowing the registration of new feeds Syndic8 provides search and browse facilities to allow you to find channels in particular areas. Channels can be registered at Syndic8 via <http://www.syndic8.com/suggest.php?Mode=data>

- **Newsisfree**

<http://www.newsisfree.com/>

Newsisfree is a large RSS aggregator with over 5,000 feeds. Feeds can be searched for or browsed by subject category. Feeds can be put forward for inclusion at Newsisfree via <http://www.newsisfree.com/faq.php>

- **Daypop**

<http://www.daypop.com/>

Daypop offers an RSS search facility which searches the content of over 7,500 news orientated feeds. Feeds can be submitted to Daypop via <http://www.daypop.com/info/submit.htm>

- **Feedster**

<http://www.feedster.com/>

Feedster is another RSS Search Engine. Feeds can be submitted to Feedster via <http://www.feedster.com/add.php>

Other means to promote your feed include;

- Providing a <link> tag in the <head> section of your web pages [Each feed should have its own link tag with a unique title] e.g.

```
<link rel="alternate" type="application/rss+xml"
title="rssfeed1" href="http://yourwebsite.co.uk/feed.rss">
```

- Tell visitors to your website that you produce RSS e.g. <http://www.eevl.ac.uk/workingwith.htm#sect3>
- Add 'syndicate this content' links from web pages with content that can be syndicated. The RSS or XML graphics described in section 3 can be used for this purpose.
- Contact interested third parties directly to inform them that your feed(s) are available.

10. Utilising RSS Feeds

Integrating third party feeds on your own website is outwith the main focus of this document. However brief pointers are included for the sake of completeness.

Since RSS files are XML and not HTML they cannot be added to a web page without processing (or parsing). RSS files can be parsed via a program installed on your own webserver or alternatively the parsing can be done elsewhere by pointing to a parser installed on another server. Parsers are available for a wide variety of programming languages and an extensive list is maintained by the RSS Workshop (<http://gils.utah.gov/rss/rssparsers.html>). Perhaps the simplest way to include an external feed on a website is to use javascript to point to an external RSS parser. For example inserting the code below on a web page will result in the specified channel, in this case EEVLs Latest News, being displayed.

```
<script src="http://www.rdn.ac.uk/rss/viewer/  
?rss=http://www.eevl.ac.uk/rss/latest-news.rss">  
</script>
```

The mechanics of this are as follows;

1. The parser at www.rdn.ac.uk retrieves the EEVL latest-news.rss feed.
2. The feed is parsed on the RDN webserver and HTML created from the XML.
3. The HTML is passed back to the browser and the feed content is included on the webpage.

11. References and Notes

Links to some useful RSS resources on the web including RSS specifications, tutorials, tools and validators are provided in section 7.

[1] RSS Tutorial for Content Publishers and Webmasters by Mark Nottingham

URL: <http://www.mnot.net/rss/tutorial/>

[2] Explanation of RSS, how you can use it, and finding RSS feeds

URL: <http://www.faganfinder.com/search/rss.shtml>

[3] BBC News site offers syndication feeds

URL: <http://holovaty.com/blog/archive/2002/09/03/1206>

[4] Miller, P. (2003). Syndicated content: more than just some file formats?, Ariadne Issue 35

URL: <http://www.ariadne.ac.uk/issue35/miller/>

Appendix 1 Example RSS 1.0 File

```
<?xml version="1.0" encoding="UTF-8"?>

<rdf:RDF
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns="http://purl.org/rss/1.0/"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns:syn="http://purl.org/rss/1.0/modules/syndication/"
  xmlns:admin="http://webns.net/mvcb/"
  xmlns:taxo="http://purl.org/rss/1.0/modules/taxonomy/"
  >

  <channel rdf:about="">
    <title>EEVL News</title>
    <link></link>
    <description>Latest News from EEVL: the Internet guide for Engineering, Mathematics and Computing.</description>
    <dc:language>en-GB</dc:language>
    <dc:date>Wed Apr 30 14:15:26 2003</dc:date>
    <items>
      <rdf:Seq>
        <rdf:li rdf:resource="http://www.eevl.ac.uk/pressrelease/pressrelmetadatabids.htm" />
        <rdf:li rdf:resource="http://www.eevl.ac.uk/pressrelease/pressreltradepubsnews.htm" />
        <rdf:li rdf:resource="http://codex.unit.liu.se/pepc2003/" />
        <rdf:li rdf:resource="http://www.internet-librarian.com/" />
        <rdf:li rdf:resource="http://www.eevl.ac.uk/pressrelease/pressrelnewinfosheets.htm" />
        <rdf:li rdf:resource="http://www.eevl.ac.uk/pressrelease/pressrelrss.htm" />
      </rdf:Seq>
    </items>
    <image rdf:resource="http://www.eevl.ac.uk/images/EEVL_link.gif" />
  </channel>

  <image rdf:about="http://www.eevl.ac.uk/images/EEVL_link.gif">
    <title>EEVL Logo</title>
    <url>http://www.eevl.ac.uk/images/EEVL_link.gif</url>
    <link>http://www.eevl.ac.uk/</link>
  </image>

  <item rdf:about="http://www.eevl.ac.uk/pressrelease/pressrelmetadatabids.htm">
    <title>Two EEVL Metadata and Interoperability Project Bids are Successful</title>
    <link>http://www.eevl.ac.uk/pressrelease/pressrelmetadatabids.htm</link>
    <description>EEVL, the Internet guide to engineering, mathematics and computing, has been successful in bids to JISC, under Funding Call 5/03: Metadata and Interoperability Projects, to undertake two projects. One project involves engineering trade information, and the other a specialist e-journal service.</description>
  </item>
```

<item rdf:about="http://www.eevl.ac.uk/pressrelease/pressreltradepubsnews.htm">
<title>New titles available - Free engineering and technical trade publication subscriptions</title>
<link>http://www.eevl.ac.uk/pressrelease/pressreltradepubsnews.htm</link>
<description>EEVL users can subscribe, at no cost, to a number of leading industry publications. There are no hidden or trial offers, and no purchase is necessary. New titles are available.</description>
</item>

<item rdf:about="http://codex.unit.liu.se/pepc2003/">
<title>EEVL to present at the Pan European Portal Conference 2003</title>
<link>http://codex.unit.liu.se/pepc2003/</link>
<description>EEVL will present a paper at the Pan European Portal Conference 2003 (PEPC 2003), Geneva, Thursday April 24 and Friday April 25, 2003. The paper will be about the Subjects Portal Project (SPP). For more information about the conference, click on the link above.</description>
</item>

<item rdf:about="http://www.internet-librarian.com/">
<title>EEVL to present at Internet Librarian International 2003</title>
<link>http://www.internet-librarian.com/</link>
<description>EEVL will be presenting at the Internet Librarian International Conference which takes place at the NEC, Birmingham from 25-27 March 2003. The event is a major European forum for Internet librarians and information professionals. The conference programme will feature speakers from EEVL and the RDN's Subject Portals Project on Tuesday 25 March (session C102) and Thursday 27 March (session B305). To find out more about Internet Librarian International 2003 click on the link above.</description>
</item>

<item rdf:about="http://www.eevl.ac.uk/pressrelease/pressrelnewinfosheets.htm">
<title>New What EEVL can do for you: Information Sheets </title>
<link>http://www.eevl.ac.uk/pressrelease/pressrelnewinfosheets.htm</link>
<description>EEVL has produced colourful new versions of three information sheets which explain how to make the most of the service. There are three sheets: one for Lecturers and Researchers, one for Students, and one for Librarians and Information Professionals.

</description>
</item>

<item rdf:about="http://www.eevl.ac.uk/pressrelease/pressrelrss.htm">
<title>New RSS Channels for Engineering, Mathematics and Computing</title>
<link>http://www.eevl.ac.uk/pressrelease/pressrelrss.htm</link>
<description>Three new RSS Channels which will allow you to easily keep on top of the latest additions to EEVLs Internet Resource Catalogue.</description>
</item>

</rdf:RDF>

Appendix 2 Example RSS 2.0 File

```
<?xml version="1.0" encoding="iso-8859-1"?>

<rss version="2.0">

<channel>
<title>Latest news releases on Engineeringtalk</title>
<description> Latest news releases of interest to Product Design and Automation Engineers from the
Engineeringtalk website. News is also featured in our free weekly email newsletter.</description>
<link>http://www.engineeringtalk.com/indexes/newsbymonth.html</link>

<item>
<title>The case for ISO9000</title>
<description>What role can statistical process control software play in helping organisations to meet
ISO9000?</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Adept Scientific</category>
<link>http://www.engineeringtalk.com/news/ade/ade227.html</link>
</item>

<item>
<title>Sealed drive gets "down and dirty"</title>
<description>Rockwell Automation has developed an IP66 rated version of the popular PowerFlex 70
AC drive.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Rockwell Automation</category>
<link>http://www.engineeringtalk.com/news/roc/roc252.html</link>
</item>

<item>
<title>"Plug and play" sensors simplify system setup</title>
<description>RDP Electronics has joined forces with National Instruments and six European sensor
manufacturers to co-ordinate the introduction of "plug and play" sensors.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>RDP Electronics</category>
<link>http://www.engineeringtalk.com/news/rdp/rdp157.html</link>
</item>

<item>
<title>Stepper building block aids system automation</title>
<description>The ViX Microstep packs an advanced motion controller with either a 250 or 500VA
power amplifier into an ultracompact case.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Micromech</category>
<link>http://www.engineeringtalk.com/news/mie/mie128.html</link>
</item>
```

<item>
<title>Enclosures provide IP66 sealing and flexibility</title>
<description>Tough and flexible TK enclosures from Spelsberg have been used to house controls for an innovative new auto-lubrication system from Filtakleen.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Spelsberg UK</category>
<link><http://www.engineeringtalk.com/news/spe/spe123.html></link>
</item>

<item>
<title>Pilot scheme leads to major order</title>
<description>A European supplier of plastic parts to the automotive industry has followed a successful pilot implementation with an order for a significant plantwide deployment of Moldflow Manufacturing Solutions.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Moldflow (Europe)</category>
<link><http://www.engineeringtalk.com/news/mfl/mfl122.html></link>
</item>

<item>
<title>Instrument chucks save precious time and money</title>
<description>Machining delicate jewellery items from precious metals demands special care, and in terms of workholding it is essential the high-value workpieces are held both safely and securely.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Leader Chuck Systems</category>
<link><http://www.engineeringtalk.com/news/lea/lea119.html></link>
</item>

<item>
<title>Digital I/O cards are ready for acquisition</title>
<description>Available from Audon Electronics is a new low-cost range of PCI digital I/O cards compatible with LabView and Wonderware InTouch Scada software packages.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Audon Electronics</category>
<link><http://www.engineeringtalk.com/news/ado/ado115.html></link>
</item>

<item>
<title>Stepper evolves to higher efficiency</title>
<description>The OMSE570 Evo 2 uses a new high-efficiency bipolar output stage that provides increased efficiency.</description>
<pubDate>Mon, 30 Jun 2003 08:00:00 UT</pubDate>
<category>Mclennan Servo Supplies</category>
<link><http://www.engineeringtalk.com/news/mcl/mcl114.html></link>
</item>

</channel>
</rss>