

CS520 Web Programming
 RSS and Atom Feeds

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What is a Feed?

XML **RSS**

```
<rss version="0.91">
<channel>
<title>Amazon.com - DVD</title>
<link>http://www.amazon.com/exec/...</link>
<description>
Up-to-date listings of Amazon.com's top items (by Sales Rank).
</description>
<docs>
http://www.amazon.com/exec/obidos/subst/xs/syndicate.html
</docs>
<item>
<title>Batman Begins (Two-Disc Deluxe Edition)</title>
<description>Batman Begins (Two-Disc Deluxe Edition) -- $19.98</description>
<link>http://www.amazon.com/exec/...</link>
</item>
<item>...</item>
</channel>
</rss>
```

The Need for Feeds

- ◆ Syndication of content that changes on a regular basis
- ◆ A new way to publish information
 - Semantic markup of content
 - Taking advantage of the popularity of feed aggregators

A Little History of RSS

RSS-DEV Working Group

Netscape

UserLand

1.0

0.90

0.91

0.91

0.92

0.93

0.94

2.0

Rich Site Summary (0.91)
 RDF Site Summary (0.9,1.0)
 Really Simple Syndication (2.0)

A Little History of Atom

- ◆ Started by Sam Ruby on a wiki in 2003
- ◆ Pie, Echo, Necho, Atom
- ◆ Atom 0.3 is widely adopted
- ◆ Atom 1.0 is now an IETF proposed standard

RSS 2.0

- ◆ RSS 2.0 Specification - <http://blogs.law.harvard.edu/tech/rss>
- ◆ <rss version="2.0">
 - <channel>

Required <Channel> Sub-Elements

- ◆ <title>
- ◆ <link>
- ◆ <description>

Optional <Channel> Sub-Elements

- ◆ <language>
- ◆ <copyright>
- ◆ <managingEditor>
- ◆ <webMaster>
- ◆ <pubDate>
- ◆ <lastBuildDate>
- ◆ <category>
- ◆ <generator>
- ◆ <docs>
- ◆ <cloud>
- ◆ <ttl>
- ◆ <image>
- ◆ <rating>
- ◆ <textInput>
- ◆ <skipHours>
- ◆ <skipDays>

Element Formats

- ◆ Contact info elements
 - Email (FirstName LastName)
 - E.g. <webMaster>csun@calstatela.edu (Chengyu Sun)</webMaster>
- ◆ Date elements
 - RFC 822-style
 - E.g. <lastBuildDate>Sun, 12 Sep 2004 19:01:55 GMT</lastBuildDate>

<item>

- ◆ <title>
- ◆ <link>
- ◆ <description>
- ◆ <author>
- ◆ <pubDate>
- ◆ <category>
- ◆ <comments>
- ◆ <enclosure>
- ◆ <guid>
- ◆ <source>

RSS Modules

- ◆ Extensions of the core specification using XML Namespace

```
<rss version="2.0" xmlns:media="http://tools.search.yahoo.com/mrss/">
...
<item>
...
  <media:content>
    <media:url>http://cs.calstatela.edu/video.mpg</media:url>
    <media:fileSize>2000000</media:fileSize>
    <media:type>video/mpeg</media:type>
  </media:content>
...

```

XML Namespace

- ◆ Resolve conflicting element names
 - E.g. <computing:windows> and <building:windows>
- ◆ Namespace declaration
 - `xmlns:prefix="URI"`
 - E.g. `xmlns:media=http://tools.search.yahoo.com/mrss/`
 - URI has to be unique

Atom Syndication Format

- ◆ <http://atopub.org/2005/07/11/draft-ietf-atopub-format-10.html>

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom">
  <title>Example Feed</title>
  <author>
    <name>John Doe</name>
    <email>johndoe@example.com</email>
  </author>
  <id>urn:uuid:60a76c80-d399-11d9-b91C-0003939e0af6</id>
  <entry>
    <title>Atom-Powered Robots Run Amok</title>
    <link href="http://example.org/2003/12/13/atom03"/>
    <updated>2003-12-13T18:30:02Z</updated>
    <summary>Some text.</summary>
  </entry>
</feed>
```

Reusable Syntax of Constructs

- ◆ Text
- ◆ Person
 - <name>, <url>, <email>
- ◆ Date, Service, Link, Category
- ◆ Identity
 - Usually a URI

ROME

- ◆ <http://wiki.java.net/bin/view/Javawsxml/Rome>
- ◆ A Java library for producing and consuming RSS and Atom feeds
- ◆ Support all versions of RSS and Atom

Package Structure

- ◆ Interface and a general implementation
 - com.sun.syndication.io
 - com.sun.syndication.feed.synd
- ◆ Specific implementations
 - com.sun.syndication.feed.rss
 - com.sun.syndication.feed.atom
- ◆ Modules and Extensions
 - com.sun.syndication.feed.module
 - com.sun.syndication.feed.sse

Feeds in Evelyn

- ◆ Feeder interface and FeedInfo
- ◆ `evelyn.feed.rome.FeederImpl`
- ◆ Spring beans configuration
- ◆ Personalized feeds??

Publish Your Feeds – Auto Discovery Links

```
<link rel="alternate" type="application/rss+xml"
      title="RSS 2.0" href="url/to/rss2/file">
```

```
<link rel="alternate" type="application/rdf+xml"
      title="RSS 1.0" href="url/to/rss1/file">
```

```
<link rel="alternate" type="application/atom+xml"
      title="Atom" href="url/to/atom/file">
```

Publish Your Feeds – MIME Types

- ◆ RSS 1.0
 - application/rdf+xml
- ◆ RSS 2.0
 - application/rss+xml
 - application/xml
 - text/xml
- ◆ Atom
 - application/atom+xml

Publish Your Feeds – Join the Cool Crowd

- ◆ Feed directories
 - Syndic8 - <http://www.syndic8.com>
 - Feedster - <http://www.feedster.com>
 - NewsIsFree - <http://www.newsisfree.com>
- ◆ Feed services
 - Feedburner - <http://www.feedburner.com>

Further Readings

- ◆ *Developing Feeds with RSS and Atom*
by Ben Hammersley
- ◆ ROME documentation at
<http://wiki.java.net/bin/view/Javawsxml/Rome>