

Open Geospatial Consortium Inc.

Date: 2006-07-19

Reference number of this document: OGC 06-050r3

Version: **1.0.0**

Category: OpenGIS® White Paper

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OGC White Paper

An Introduction to GeoRSS:

A Standards Based Approach for Geo-enabling RSS feeds.

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Document type: OpenGIS® White Paper
Document subtype: White Paper
Document stage: APPROVED
Document language: English

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i. Preface – Executive Summary

This document describes GeoRSS: Geographically Encoded Objects for RSS feeds.

[GeoRSS](#) is simple proposal for geo-enabling, or tagging, "really simple syndication" (RSS) feeds with location information. GeoRSS proposes a standardized way in which location is encoded with enough *simplicity* and *descriptive power* to satisfy most needs to describe the location of Web content. GeoRSS may not work for every use, but it should serve as an easy-to-use geotagging encoding that is brief and simple with useful defaults but extensible and upwardly-compatible with more sophisticated encoding standards such as the [OGC \(Open Geospatial Consortium\) GML](#) (Geography Markup Language).

Currently, there are two ¹GeoRSS serializations²: GeoRSS GML and GeoRSS Simple. GeoRSS GML is a formal [GML](#) Profile, and supports a greater range of features than GeoRSS Simple, notably coordinate reference systems other than WGS84 latitude/longitude. GeoRSS is designed for use with [Atom 1.0](#), [RSS 2.0](#) and [RSS 1.0](#), although it can be used just as easily in non-RSS XML encodings. GeoRSS Simple has greater brevity, but also has limited extensibility.

Suggested additions, changes, and comments on this White Paper are welcome and encouraged. Such suggestions may be submitted by email message or by making suggested changes in an edited copy of this document.

ii. Submitting organizations

The development of GeoRSS is the result of a collaboration of many individuals. The GeoRSS work is performed under the Collective Commons Attribution-ShareAlike 2.5 License. <http://creativecommons.org/licenses/by-sa/2.5/>.

iii. GeoRSS White Paper and OGC contact points

Any questions regarding this document should be directed to the editor or any the following contributors:

CONTACT	COMPANY	E-Mail ADDRESS

¹ GeoRSS also serves informally as an extension to the W3C [geo \(point\)](#) vocabulary (www.w3c.org)

² From Wikipedia: **serialization** is the process of saving an [object](#) onto a storage medium (such as a file, or a memory buffer) or to transmit it across a network connection link such as a [socket](#) either as a series of bytes or in some human-readable format such as [XML](#).

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Please note that there are many other GeoRSS contributors. You may also subscribe to the GeoRSS email list at georss@lists.eogeo.org.

iv. Future work

Improvements in this document are desirable to account for status changes in the GeoRSS specification and to outline further examples. Proposed work has to do with adding the ability to work with location as defined by Civic addresses and time.

3 Special thanks to Eogeo for hosting the georss website and email list.

Foreword

There are no annexes to this document. This is an Informative document that describes an approach for geo-enabling RSS feeds. The approach does make use of existing OGC standards as well as work done in the W3C.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The OGC shall not be held responsible for identifying any or all such patent rights.

Please note: Material in this white paper is taken from multiple reference sources, including OGC written documents, various websites, email correspondence, and the GeoRSS website (www.georss.org). Specifically, the information model in Section 7.1 and the GML GeoRSS Profile (Section 7.3) is from the georss website. That web site is under the terms of the Creative Commons Attribution-ShareAlike 2.5 license. The contents of this document are available for use as per the Creative Commons Attribution-ShareAlike 2.5 license that can be found at <http://creativecommons.org/licenses/by-sa/2.5/> and OGC Copyright. GML is under OGC copyright.

Introduction

Web feeds are widely used by the [weblog](#) community to share the latest entries' headlines or their full text, and even attach multimedia files. (See [podcasting](#), [vodcasting](#), [broadcasting](#), [screencasting](#), [vlogging](#), and [MP3 blogs](#).) Since mid-2000, use of RSS has spread to many of the major news organizations, including Reuters, CNN, PR Newswire, Business Wire, and the BBC. These providers allow other websites to incorporate their "syndicated" headline or headline-and-short-summary feeds under various usage agreements. RSS is now used for many purposes, including marketing, bug-reports, or any other activity involving periodic updates or publications. Many corporations are turning to RSS for delivery of their news, replacing email and fax distribution. (Source:WikiPedia)

The last two sentences are key to understanding the full potential of a location enabled RSS feed. RSS isn't just for news and blogs. RSS is a format for breaking a piece of information down into its atomic parts, like the author, date, headline and full content of the story. Formally specifying these parts, and sharing that specification with the world, allows content to be re-purposed and represented in various formats, and even lowers the bar for content creation. This makes an RSS-backed publication, like a weblog, much easier to develop a Web site around rather than just using HTML. Recently, RSS has been used for any content that 1) changes relatively often; 2) is intended to be published in places other than a simple Web site; and 3) is more useful when combined with other, related content (see [xml.com](#), "[What is RSS](#)" for a good introduction).

In the geospatial world, we could easily dismiss the importance of the RSS format because we've been dealing with more complex geospatial problems, such as content maintenance and content integration and fusion. The power of juxtaposing related information is second nature to the geo-professional, as overlaying different data sources on maps is our bread-and-butter. Many non-geospatial information communities, however, are just discovering this power.

Our imperative, as a community is to embrace this new form of information publishing as and move the state of geospatial publishing forward in step with the mainstream IT industry. We often pay lip service to the idea that non-geospatial industries could benefit greatly from our technologies and standards, but we fail to meet them half way—instead trying to force-feed them our traditional GIS tools. GeoRSS, created outside the OGC but supported and sponsored by the OGC and potentially an OGC standard, is intended to bridge these two worlds, using technology that is robust enough to meet the needs of both the geospatial and non-geospatial communities, yet familiar enough to avoid alienating either.

The initial goal of the GeoRSS collaboration was to keep the encoding of geography on the Web from fracturing into various encodings the way RSS ended up, with multiple similar implementations (RSS 0.9, 1.0, 2.0 and Atom) having slight differences that don't

add much in terms of “expressivity”, but continue to give RSS readers a headache. GeoRSS is also intended to be a lightweight way to express geography in other XML-based formats – including XHTML.

GeoRSS Overview and Architecture Document

1 Scope

This document describes a standardized approach for encoding location (geography) into RSS feeds. The document contains a variety of examples and use cases. Both GeoRSS Simple and GeoRSS GML (extended) utilize the same geometry and are therefore compatible. The majority of the content in this document can also be found – with many examples – on the GeoRSS web site – www.georss.org.

2 Conformance

At this time there are no conformance clauses. Validation of a GeoRSS enabled feed

3 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this document. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the normative document referred to applies.

OGC 03-105r1 (with corrigendum), *OpenGIS[®] Geography Markup language 3.1.1 (GML)*

OGC 04-092r4, GML 3.1.1 schemas.

OGC 05-029r4, *GML Point Profile*

4 GeoRSS Overview

4.1 What is RSS, Syndication, etc.

RSS⁴ is a family of [web feed](#) formats, specified in [XML](#) and used for [Web syndication](#). A **web feed** is a document (often [XML](#)-based) 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. The two main web feed formats are [RSS](#) (which is older and far more widely used) and [Atom](#) (a newer format that has just completed the [IETF](#) standardization process.)

RSS/XML/Atom are technologies, but syndication is a process. **RSS** and **Atom** are two flavours of what is more or less the same thing: a '**feed**' which is a wrapper for pieces of regularly and sequentially-updated content, be they news articles, weblog posts, a series of photographs, and more. For the purposes of this article, consider the terms interchangeable. **XML** is the base technology both are built on, but that's almost totally irrelevant; the orange buttons are mislabelled, and should read 'RSS' or 'Atom' instead.

So, **Syndication** is the process of using RSS/Atom for automated updates, another way of getting the information you want. You no doubt have a list of web sites you browse daily for updates, whether they're stored in your bookmarks or your head. If you find yourself loading 20 or 30 sites a day, and you notice if a few stop updating as frequently, you'll inevitably stop checking them.

What if there were instead some way to have your list of bookmarks notify you when the sites you read have been updated? You wouldn't waste time checking those that haven't. Instead of loading 30 sites a day, you might only need to load 13. Cutting your time in half would enable you to start monitoring more sites, so for the same amount of time you originally invested in checking each site manually, you may just end up following twice as many.

The terms "publishing a feed" and syndication are used to describe making available a feed for an information source, such as a blog. Like syndicated print newspaper features or broadcast programs, web feed contents may be shared and republished by other web sites. (For that reason, one popular definition of RSS is [Really Simple Syndication](#).)

More often, feeds are subscribed to directly by users with [aggregators](#) or feed readers, which combine the contents of multiple web feeds for display on a single screen or series of screens. As of 2006, the latest advance in this area is the appearance of web browsers incorporating aggregator features. Depending on the aggregator, subscription is done by

⁴ The RSS and Web Feed definitions are from WikiPedia. http://en.wikipedia.org/wiki/Web_feed

⁵ From David Shea, What is RSS/XML/Atom Syndication. http://www.mezzoblue.com/archives/2004/05/19/what_is_rss/

manually entering the URL of a feed, by clicking a link in a web browser or by various other methods.

Web feeds are designed to be machine readable, so there is no requirement that they be destined only for human readers. For example, business partners could use web feeds to exchange sales data or other information without any human intervention.

This concise, structured format has also proven useful for publishing all kinds of small, time-sensitive nuggets of information, including [Flickr's](#) photo journals, [Craigslist classifieds](#), and [local events](#).

4.2 So what is GeoRSS?

[GeoRSS](#) is simple proposal for RSS feeds to also be described by location or [Geotagged](#). GeoRSS standardizes the way in which "where" is encoded with enough *simplicity* and *descriptive power* to satisfy most needs to describe the location of Web content.

Perhaps the most powerful advantages of GeoRSS feeds will be seen in the possibilities for geographic search and aggregation. More than just getting feeds for a particular city or zip code, using GeoRSS it will be possible to search with all sorts of geographic criteria. Perhaps all earthquake-related items within 20 miles of your home--delivered to your phone, or a feed of traffic accident items along your daily commute? Once RSS feeds contain geographic location, applications like these and more will be possible.

4.3 Motivation

The idea of having a lightweight geography tag has a long history and goes back to something called ICBM (1989). Probably the best known geotagging capability started with the W3C Semantic Web Interest Group [<http://www.w3.org/2003/01/geo/>], with Dan Brickley's <geo:lat> and <geo:long> tags. The W3C approach works well when describing a single point location.

However, users will encounter problems when trying to do more with the W3C encoding, such as describe lines or areas, use a coordinate system other than WGS 84 lat/long, or associate other attributes, such as elevation, with the geography. As an example of the need for more than just a point, consider a blog about a stroll through the streets of Paris. Each RSS entry from such a blog could perhaps be described by a point location, but the entire voyage is clearly a linear path. The line description is especially important for making maps of trips with trip lengths, intersections, and so on. Boundaries are important when you need to specify the edges of an area, which is very useful in talking about things within a certain state, town, or neighborhood for example.

But the problem with doing more is that defining the geography can get so complex that casual users are loath to learn the syntax. In the OGC, we have a completely expressive, extensible way of encoding geography called Geographic Markup Language (GML). However, the uptake of GML in the mainstream Web community has been slow, primarily because GML is viewed as complex. Much simpler GML profiles have begun to appear, speeding progress. GeoRSS is likely to become the smallest, most "atomic" GML profile.

The specification of GeoRSS is the result of an ongoing collaboration of Geo-IT professionals, OGC staff and members, and other highly creative individuals. This group set out to define the simplest possible geographic encoding that would still be expressive and standards-friendly enough to satisfy the professional geospatial community while at the same time being simple enough to garner quick acceptance from mainstream web and RSS developers. We still have a little dissension—that’s why there are still two encodings—but we’re close, and we’ve done better than RSS with its four major encodings in widespread use today.

4.4 History of GeoRSS

This section is a bit lengthy but serves to show that any “new” technology does not simply appear but typically has a long and interesting history.

- 1997 - Dave Winer "plays around" with web feeds.
- 1998: Internet RFC 2445 – iCalendar, released as an Internet standard. The standard has a simple location syntax for a point geometry. This is relevant because it appears that the W3C geo syntax is based on the one in iCalendar.
- 1999 RSS “invented” – Netscape RSS v 0.9 released
- 1999 April - geotags.com registered (see below) by Andrew Daviel of Richmond, BC, Canada
- 2000 February: Andrew Daviel of Richmond, BC, Canada stands up Geotags.com <http://web.archive.org/web/20000226130843/http://geotags.com/>
- 2001: Internet draft submitted to the IETF for Geo-registration (geotagging) of HTML documents, Kaegi and Daviel. Never became a standard but significant because it appears to build on the iCalendar syntax but is much richer and more semantically rigorous.
- 2001 February: Yahoo geowanking discussion list. Minor discussion on how to link an RSS message to a geographic location.
- 2002: GeoURL concept established - geotagging of URL locations. www.geourl.com
- 2002 July: RDFMap (Chris Goad): First known instance of geo-enabling an RSS document. <http://www.mapbureau.com/rdfmap0.91/index.html> . Interesting to note that the developers also checked out GML 2.x, used the geometry model but modified the syntax so that it would work with RDF.
- 2003 January: Josh Lieberman gave a presentation at the UN TC meeting in New York. http://portal.opengeospatial.org/files/?artifact_id=8603 describes a GeoRSS like concept and its use vis-a-vis WM Context.
- 2003 January: First version of the W3C "geo" vocabulary/syntax published. geo is a simple micro-format (RDF based) for geo-tagging web content using a point geometry. <http://www.w3.org/2003/01/geo/>

- 2003 April - World as a Blog - Maps RSS blog posts in real time based on GeoURL tags.
- 2003 April: Daniel Smith at <http://ThereAndThen.org> (defunct) talks about geotagging photos and using RSS to do so.
- 2003 May. First known instance of the use of the term "georss". In an email in the geowanking discussion list. Began with a list discussion of adding location coordinates to RSS that was in a post by Karlis Karlnin on May 3, 2003. <http://lists.burri.to/pipermail/geowanking/2003-May/000073.html> . Then there was a post on May 26, 2003 by Mike Liebhold using the term GeoRSS - a term which may not have ever been used before, although the -idea- had been around for several years. <http://lists.burri.to/pipermail/geowanking/2003-May/000155.html>
- 2003 July: Harvard releases RSS 2.0 - <http://blogs.law.harvard.edu/tech/rss>
- 2003 October: Mike Liebhold rambles about "web map interoperability", lamenting that "On the web hypermedia side we have no standard geocodes (geourl is a good start),.."
- 2004 Summer: geowanking discussion list on the concept of a geourl molecule code. This would be a microformat for geo-tagging content.
- 2004 July: Raj Singh presented a paper on GeoBlogging in the summer of 2004 at URISA's Public Participation and GIS conference in which he mentions the georss concept: <http://web.mit.edu/rajsingh/www/cmp/collabmaps/Singh-GeoBlogging.pdf>.
- 2004: During the summer of 2004, Raj, Josh, Allan, and Tony Pryor discussed geo-enabling feeds at the Boston area GIS Interest Group meeting.
- 2005 February: At Location Intelligence, Carl had a meeting with Dave Sonnen in which they discussed light-weight geospatial payloads and standards related work being done in the IETF.
- 2005 March: At the BAAMA Symposium, Carl Reed had dinner with Mike Leibhold and discussed the concept of geo-enabling (or geotagging) light-weight payloads as part of Web 2.0 and the geospatial web, including web feeds.
- 2005 April: George Percivall, Ron Lake, and Carl Reed write a draft GML Point Profile.
- 2005 July. Raj Singh, Josh Lieberman, and Allan Doyle decided to go for georss. Raj Singh registers the georss.org domain on 7/20/2005. This could be considered the official start date of the current georss initiative. Allan Doyle sets up the georss server on an egeo machine over the next couple of days.
- 2005 Summer: Raj Singh stands up georss.mit.edu feeds application.
- 2005 July: The IETF releases ATOM 1.0 as an internet standard.
- 2005 August: Then in August 7th and 8th, Raj Singh and Carl Reed had an email exchange on ATOM and how we might have missed the boat in terms of

providing input to geo-enable ATOM. This led Carl Reed to have a dialogue with Tim Bray (major enabler for the development of the ATOM spec) about geoenabling ATOM.

- 2005 August: All this discussion led to an August 18th teleconference to have a brainstorming session that included Allan Doyle, Josh Lieberman, Raj Singh, Ron Lake, and Carl Reed. There were actually a series of teleconferences and emails. Some of the teleconferences pre-dated the dialogue with Tim Bray.

NOTE: At this point, many others began contributing to the discussion, setting requirements and so forth.

- 2005 October: Allan Doyle developed the concept of using a content model of GeoRSS that led to the current understanding of a content model with serializations in other forms.
<http://lists.eogeo.org/pipermail/georss/2005-October/000113.html>
- 2005 November: georss list discussion narrow in and define the concept of GeoRSS Simple.
- 2006 January: What we believe to be the first official version of this flavor of GeoRSS ready for implementation.
- 2006 March: Mikel Maron stands up first georss feed validation development capability.

4.5 GeoRSS examples:

The following are GeoRSS examples and demonstrate what GeoRSS Simple and GeoRSS GML encodings look like. The location being specified is city center Ft. Collins.

Simple GeoRSS:

```
<georss:point>40.533203 -105.0712</georss:point>
```

GML GeoRSS

```
<GeoRSS:where>  
  <gml:Point>  
    <gml:pos>40.533203 -105.0712</gml:pos>  
  </gml:Point>  
</GeoRSS:where>
```

These examples are in XML. However, RSS and GeoRSS are general models that can also be expressed in other serializations such as Java, RDF or XHTML.

Please reference the georss website for detailed examples (www.georss.org).

4.6 Relationship of GeoRSS GML and GML

The GeoRSS GML encodings are very similar to what a formal GML profile would be. From the OGC GML Point Profile Discussion Paper, a Point geometry is expressed as follows:

```
<gml:Point srsName="urn:ogc:def:crs:EPSG:6.6:4326">
  <gml:pos>40.533203 -105.0712</gml:pos>
</gml:Point>
```

As can be seen, the GeoRSS GML encoding for a point is very similar to a full GML structure. However, in GeoRSS the assumption is made that the default CRS is WGS 84 lat/long 2d. This really simplifies the encoding and the ability of “hackers” to understand and implement GeoRSS.

5 GeoRSS Model and Encoding

This section describes the GeoRSS Information Model and encoding rules for developing serializations of GeoRSS.

5.1 GeoRSS Information Model

Figure 1 shows the UML model for GeoRSS (source: <http://www.georss.org/model.html>).

The left side of Figure 1 represents GeoRSS, the right side represents the "external" content that GeoRSS is being used to describe. In the model, **where** is an association of a **geometry** to some **content**. GeoRSS places no constraint on the type of content, nor on its format.

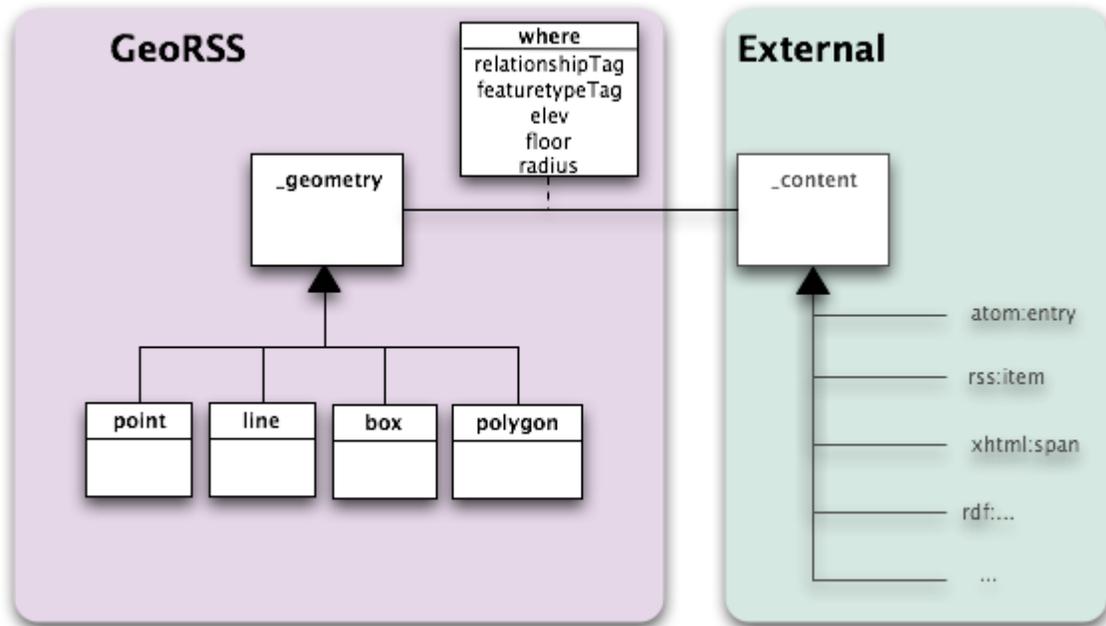


Figure 1: General GeoRSS Information Model (Source – GeoRSS web site)

GeoRSS itself is identified by a namespace "georss:". The model above does not show, but allows, the inclusion of any other elements from other namespaces.

The model is specified as an abstract concept. In order to use the model, it must be expressed in a concrete form such as XML, RDF, etc. In GeoRSS, these expressions are called **serializations**.

By allowing for the definition of multiple serializations, all of which conform to the model, GeoRSS provides the means of relating one serialization to another. It also allows for implementations of the model using a variety of implementation platforms.

5.2 Content model for Simple GeoRSS

GeoRSS Simple is designed to be both concise and simple, in both representation and conception. “Taggage” is kept to a minimum.

This simplicity comes at the cost of direct upward compatibility with GML. However, through the GML model, it is straightforward to devise transformations from GeoRSS Simple to the GeoRSS GML. For many needs, GeoRSS Simple will be sufficient. The default CRS for Simple GeoRSS is WGS 84, 2d.

Currently, GeoRSS Simple supports Point, Line, Polygon, and Box geometries. It also supports feature type and relationship tags as well as the ability to encode elevation and radius. Radius is used in conjunction with Point to allow specification of a circle.

The detailed description of GeoRSS simple can be found on the GeoRSS website.

5.3 GeoRSS GML Content Model

Geography Markup Language (GML) is an XML grammar written in XML Schema for the modelling, transport, and storage of geographic information. GML provides a variety of objects types for describing geography including features, coordinate reference systems, geometry, topology, time, units of measure and generalized values. A geographic feature is "an abstraction of a real world phenomenon; it is a geographic feature if it is associated with a location relative to the Earth". So a digital representation of the real world can be thought of as a set of features.

GeoRSS GML can be thought of as a simple [GML version 3.1.1](#) profile. As with all GeoRSS encodings, if not specified, the implied coordinate reference system is WGS84 with coordinates written in decimal degrees.

5.4 XML examples of using GeoRSS

5.4.1 Cambridge, MA events from cambridgema.gov – GML GeoRSS and Atom

This example of using GeoRSS in an Atom feed was developed by Raj Singh (OGC) as part of an application for the City of Cambridge, MA.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
_ <feed xmlns="http://www.w3.org/2005/Atom"
_   xmlns:georss="http://www.georss.org/georss"
_   xmlns:gml="http://www.opengis.net/gml">

  <title>Cambridge events for the next 7 days</title>

  <link rel="self"
    href="http://georss.mit.edu/cambridgeevents.php" />

  <updated>2006-06-15T01:00:00-04:00</updated>

  <link href="http://georss.mit.edu" />

  _ <author>
    <name>Raj Singh</name>
    <email>raj@rajsingh.org</email>
    <uri>http://www.rajsingh.org</uri>
  </author>

  <id>http://georss.mit.edu/cambridgeevents/georss/gml</id>

  _ <entry>
```

```

<title>Center for Families Fun Day</title>

<link rel="via"
href="http://www.cambridgema.gov/Calendar.cfm?typeid
=&calType=City&month=6&view=daily&day=2006-06-
17&id=13743" />

<id>http://www.cambridgema.gov/Calendar.cfm?typeid
=&calType=City&month=6&view=daily&day=2006-06-
17&id=13743</id>

<updated>2006-06-17:00</updated>

<content type="html">Lots of fun activities for toddlers and
preschoolers and field events for older kids.&#160
<br/><br/><em>Location:</em> Rindge Field - (behind
Peabody School) <br/><em>Address:</em> 70 Rindge
Avenue</content>

_ <georss:where>

_ <gml:Point>

    <gml:pos>42.392622 -71.128237</gml:pos>

</gml:Point>

</georss:where>

</entry>

_ <entry>

```

6 Examples of GeoRSS implementations

The following are several operational implementation examples of GeoRSS. This list represents only a fraction of the total number of GeoRSS implementations.

6.1 Explore Our Planet

A very recent example of the use of GeoRSS is available on the Explore our Planet website site: <http://exploreourpla.net/>. The following description is from the Explore our Planet web site.

6 By permission of Torsten Becker, exploreourpla.net.

With their latest GeoRSS feed reader users can read, listen and view latest news on the map and use links to mentioned places.



The geofeedException displays colored icons for each news entry. All sources have their individual color and icons and news entries are linked.

Some examples on proper usage for feeds are listed in the post: [interesting-rss-feeds-for-geotagging.html](#). There is a list for all users with exciting RSS channels, registered users define their favorites in the [extended profile editor](#).

How does this GeoRSS Implementation work? Much of the data processing is done at [geonames.org](#) (see below). Details of this GeoRSS implementation can be found at <http://exploreourpla.net/2006-06-08/georss-feed-reader-shows-podcasts.html>.

6.2 Geo-Names.org (<http://www.geonames.org/>)

The Geonames "*RSS to GeoRSS Converter*" reads the entries of an RSS feed and searches the Geonames Database to find a location for the entry text. If a relevant location is found, its latitude and longitude are added to the RSS feed using the GeoRSS encoding. It works for any RSS feed, just pass the feed URL as a parameter to the converter and your feed entries will get latitude and longitude in real time. All GeoRSS encodings are supported.

With the converter you can for example view the [Reuters World News on a Map](#).

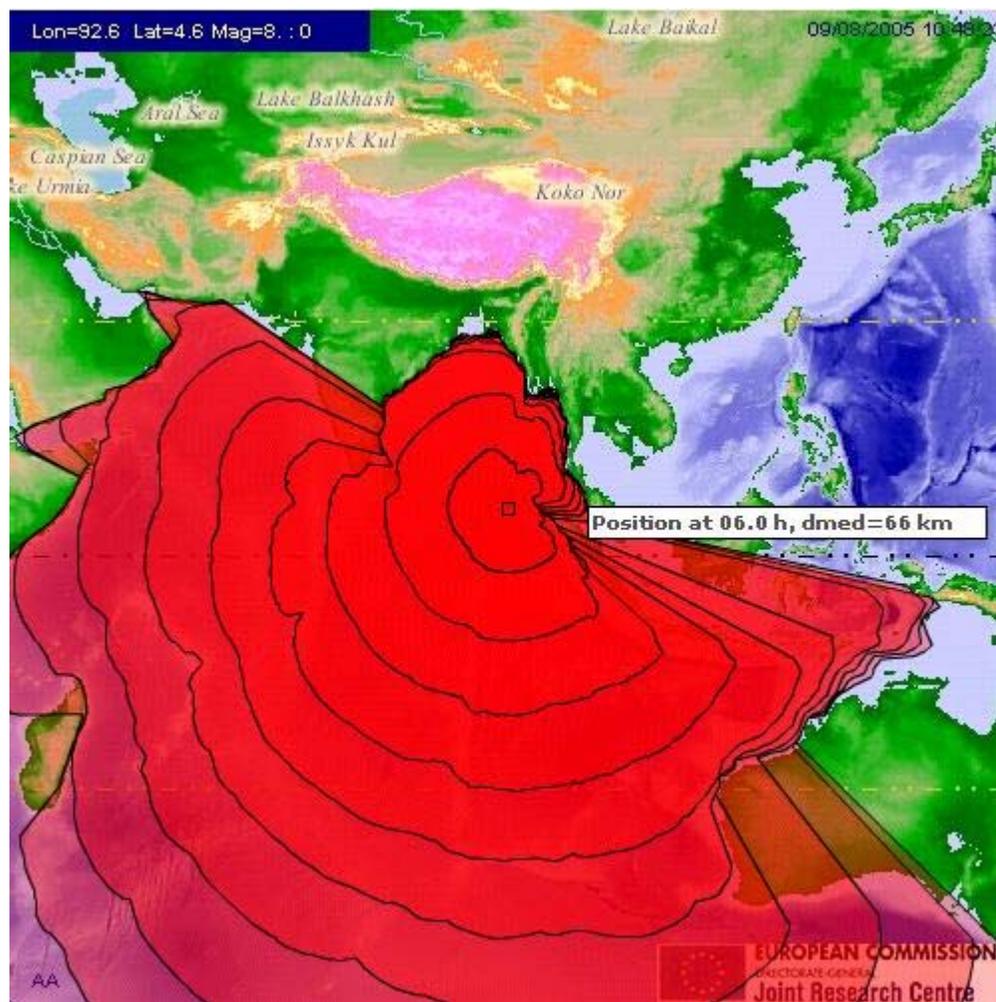
The converter is a 'natural language processor' and needs to take into account in which language a text is written. Supported languages are English, German, Spanish, French and Italian.

Many words have several meanings e.g. Java, so an important part of the process is [Place Name Disambiguation](#). The RSS-to-GeoRSS-Converter checks the grammatical structure plus the context and geoparses the place or toponym, which may a city, a volcano, a building or a country. All this is done within seconds.

The next step in the process is a gazetteer search that returns the coordinates as latitude and longitude from the 6 million rows database at geonames.org. Finally, the RSS feed is transformed into a GeoRSS feed.

6.3 USGS, JRC, WorldKit etc⁷

Over two years ago, the USGS began publishing [GeoRSS earthquake alerts](#). Following the Asian Tsunami, the Joint Research Centre at the European Commission built a [real time tsunami alert system](#), by triggering an online tsunami simulation based on USGS published earthquake events, then publishing the results for subscription and visualization in GeoRSS. Soon after, the JRC and several UN humanitarian aid agencies began cooperation on construction of a common alert and coordination system for natural disasters, [GDACS](#). Information from several separate organizations needed to be gathered, processed and republished. They chose to use GeoRSS, with the addition of their own domain specific extensions. RSS was simply the fastest way they could come to agreement, and get on with their crucial work.



Visualization of a Tsunami model from GeoRSS

⁷ This section by permission of Mikel Maron.

6.4 TripTracker (<http://triptracker.net/>)

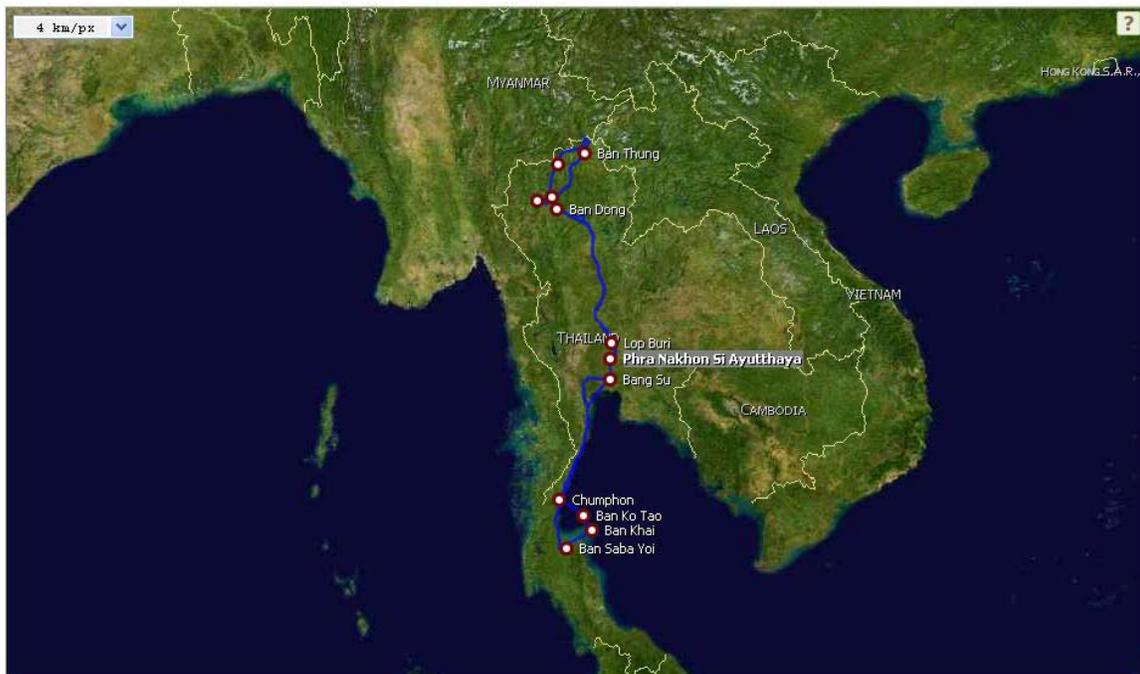
TripTrackers is used for creating and sharing travel journals. GPS track logs can be imported to automatically geotag photos; nearby photos are also grouped into geocoded trip entries.

Trips are presented using a JavaScript map interface (similar to Google Maps, but with richer photo presentations). These maps render an Atom feed containing GeoRSS GML. TripTracker uses `<gml:Point>` tags to present locations of trip entries and photos. They also use `<gml:posList>` tags to render GPS track logs.

Here is an example of a GeoRSS feed:

<http://triptracker.net/trip/263/georss>

And the resulting map:



The GeoRSS development is currently (July 2006) a work in progress. Plans are to make the GeoRSS output compatible with other viewers and possibly add support for rendering other GeoRSS variants.

6.5 And just recently available (late June 2006)

- [GeoTagThings](#), “a simple way to assign any web resource - anything with a url - a location in the normal, human physical world”, launched with GeoRSS support.

- [Flagr](#) added GeoRSS to its [feeds](#).
- [Plazes](#) quietly added GeoRSS to some of its [feeds](#), and has more complete support across their service in the works.
- [VirtualEarth](#) is pushing forward its support of GeoRSS.

7 GeoRSS and RSS Aggregators⁹

Aggregation is a crucial component in the RSS ecosystem, so expect Geo aware RSS aggregators to be a powerful tool. Users and developers will be able to layer numerous sources of GeoRSS and search RSS with a particular location. Think of it a true web native GIS. Following the GMaps API, many services have sprung up to enable users to easily build their own maps without any programming. Among [Wayfaring](#), [Platial](#), [Tagzania](#), [Plazes](#), and the rest, there's a desire to tear down their walled gardens early on and [share their user contributed data](#). GeoRSS aggregation could be the key here. And just recently a new GeoRSS aggregator: [mapufacture](#) .

mapufacture is a new GeoRSS aggregator. The application allows the user to layer multiple GeoRSS feeds from different sources into a single map, and search the database of GeoRSS feeds by keyword and location. Search results are themselves available as GeoRSS feeds.

8 Conclusion

GeoRSS definitely holds promise to put the rich geospatial content directly in the hands of the consumer community, allowing individuals with no deeper technology skills than mastery of blogging to become geospatial data publishers. We may even be close to seeing Powerpoint-esque map publishing tools that combine Internet services like WMS and GeoRSS to make mapping a standard part of the business graphics toolset. How far from this day are we?

⁹ By permission of Mikel Maron. From a paper presented at Xtech, May, 2006.