

# ICBM RSS MODULE<sup>1</sup>

[By Matt Croydon, Postneo]

Here's a quick RFC.

## Note:

This RSS module is an implementation of an idea that was completely **Kenneth Hunt's**. It would not exist if it were not for him.

**Kenneth Hunt** and I have been exploring some geographical stuff as they relate to weblogs, news, technology, and all of that jazz. This RSS module addresses how to geolocate your RSS feed or individual items. I've been exploring the **GeoURL** meta tags and decided to take it to the next level. Here is an RSS module that should integrate easily into RSS 2.0 and probably will work in RSS 1.0. I've taken its structure from **Dave Winer's creativeCommons module**.

We have two elements which can be applied either to the <channel> or <item> elements. If applied to the <channel> element, it is assumed that the entire feed can be assumed to be about or originating from that specific location. If applied to the individual <item> (the cool way to do it), the specific item can be considered originating from or about that geolocation.

Here are the two elements covered in the icbm module:

```
<icbm:latitude>39.02980</icbm:latitude>  
<icbm:longitude>-77.07929</icbm:longitude>
```

The namespace for this module is the URL that you are reading right now: **http://postneo.com/icbm**. An example RSS 2.0 feed making use of the icbm module is **here**. And I checked, **it validates**.

## Implementations (Added 4/13/03)

I have currently implemented this module with **MovableType** and **Blosxom**. Please refer to my posts about the **Blosxom**

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<sup>1</sup> Last update 7 July 2003.


**implementation** and the **MovableType implementation**. More will come.

Implementing this with templates has been fairly trivial in some blogging packages, but I haven't done them all. I'm also not quite sure how to take advantage of this, but I'm sure it could be used in news aggregators and **rss search services** and a bajillion other things.

### **Other Modules** (added 5/23/03)

Thanks to an alert wiki user who pointed out an RDF-based way of doing this. More information can be found at the **WGS 84 Geo page**.

### **Thoughts**

I'm curious about what people might have to say about this module. As of this instant, I would consider it usable but subject to change. Feel free to discuss this amongst yourselves, send me an email  or move your discussions over to the **icbm module wiki page**.

## Example File<sup>2</sup>

```
<?xml version="1.0" ?>
- <!--
RSS generated by Radio UserLand v8.0.8 on Thu, 10 Apr 2003 19:05:51 GMT
-->
- <rss version="2.0" xmlns:icbm="http://postneo.com/icbm">
- <channel>
  <title>Matt Croydon::postneo</title>
  <link>http://postneo.com/</link>
  <description>What comes next?</description>
  <language>en-us</language>
  <copyright>Copyright 2003 Matt Croydon</copyright>
  <lastBuildDate>Thu, 10 Apr 2003 19:05:51
    GMT</lastBuildDate>
  <docs>http://backend.userland.com/rss</docs>
  <generator>Radio UserLand v8.0.8</generator>
  <managingEditor>matt@ooiio.com</managingEditor>
  <webMaster>matt@ooiio.com</webMaster>
  <category
    domain="http://www.weblogs.com/rssUpdates/changes.
    xml">rssUpdates</category>
  <ttl>60</ttl>
- <item>
  <icbm:latitude>39.02980</icbm:latitude>
  <icbm:longitude>-77.07929</icbm:longitude>
  <title>Managed Unmanned Aircraft</title>

  <link>http://postneo.com/2003/04/10.html#a2380<
  /link>
  <description><P><A
    href="http://www.crabapples.net/rob/archive/2003
    _04_06_default.htm#200127366">Rob Fahrni</A>
    points to <A
    href="http://www.sax.net/live/?date=4/10/2003#a
    t12:16AM">Mike Sax</A>:</P> <BLOCKQUOTE
    dir=ltr style="MARGIN-RIGHT: 0px"> <P>A team at
    <A
    href="http://www.cuuav.org/portals/air/Default.as
    px?PageID=83">Cornell University</A> is flying
    unmanned airplanes using Embedded XP, C#, and
    components from our <A
    href="http://www.sax.net/framework">Sax.net
    Connected Framework</A>. All the navigational
    sensors and controls connect to an array of serial
    ports. While debugging the flight control algorithms,
    the software interfaces with Microsoft Flight
    Simulator, for obvious
```

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<sup>2</sup> From postneo.com/icbm/test.xml.

reasons.</P></BLOCKQUOTE> <P  
dir=ltr>Sweet.&nbsp; Only fly managed unmanned  
aircraft.</P></description>

<guid>http://postneo.com/2003/04/10.html#a2380  
</guid>  
<pubDate>Thu, 10 Apr 2003 19:05:47 GMT</pubDate>  
</item>  
</channel>  
</rss>

## RDFIG Geo vocab workspace<sup>3</sup>

Nearby: **ESW:GeoInfo** Wiki entry

This is a workspace for RDF Interest Group Geo vocabulary work, starting with an emphasis on representing WGS84 (world geodesic survey) lat/long/alt positions in RDF.

This document is a first-cut at providing some accompanying context for the RDF vocabulary described below. Any supporting files can be accessed by **browsing the file listings** provided below.

The origin of this workspace was the **2003-01-09 discussion** in the RDF Interest Group **IRC channel**. We are taking a similar approach to the exploration of RDF vocabulary for calendars, although that work is more mature. See the **RDF Calendar Workspace** for more information.

### An RDF Geo Vocabulary: Point/lat/long/alt

Currently we have only a very minimalistic RDF vocabulary for describing **Points** with **latitude**, **longitude**, and **altitude** properties from the WGS84 reference datum specification. This design allows for basic information about points to be described in RDF/XML, and augmented with more sophisticated or application-specific metadata.

The vocabulary also defines a property **lat\_long**, but this should probably be removed, as few commentators have valued it.

The vocabulary defines a class 'Point', whose members are points. Points can be described using the 'lat', 'long' and 'alt' properties, as well as with other RDF properties defined elsewhere. For example, we might use an externally defined property such as 'bornNear' or 'withinFiveMilesFrom', or perhaps other properties for representing lat/long/alt in non-WGS84 systems.

Whitespace in property values is insignificant, and discouraged. We do not use RDF's datatyping mechanism in the vocabulary's schema to note that the `rdfs:range` of the `lat`, `long` and `alt` properties are XML Schema `float` datatypes. Instead, from RDF's point of view, the properties are simply strings. This reduces the syntactic burden on RDF/XML documents using our vocabulary, since we write `lat` and `long` information as strings. The string representation of `lat` and `long` should follow the rules for XML Schema `float`, even though we do not indicate explicitly in RDF that we are representing floating point numbers. A future version of this document may be stricter about whitespace when marking up `float` values,

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<sup>3</sup> From <http://www.w3.org/2003/01/geo/>

so it is probably best to avoid any whitespace in your lat/long/alt markup.  
(*@@todo*: try to offer clearer advice here)

As this is an RDF vocabulary, we define properties of a kind of thing, a **Point**, rather than the structure and characteristics of an XML document type. XML Schemas and DTDs typically adopt the latter approach, and thus provide more guarantees about the information content of each document of some type. By contrast, our RDF vocabulary provides no guarantee about which things will be described in any particular RDF/XML document. For example, it may turn out that many point descriptions omit the altitude property, 'alt'. This doesn't make those documents *invalid* in any sense; they are merely less informative.

We can note some rules for reasoning about the identity conditions for points. If we encounter a description of a **Point**, call it ?X, and another, call it ?Y, and ?X and ?Y have identical values for their 'lat' and 'long' and 'alt' properties, we can conclude that ?X == ?Y, ie. that ?X and ?Y represent the self-same thing. Anything that has any 'lat', 'long' or 'alt' properties will be a 'Point'. In our RDF Schema for the vocabulary, we indicate this using the `rdfs:domain` property.

A **Point** has only one 'lat', only one 'long', and only one 'alt'; we could use W3C's Web Ontology Language (OWL) to express this. OWL allows us to note that these RDF properties are 'functional properties'. *@@TODO: does it? or does OWL only allow this for non-datatype properties?*

## Example

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:geo="http://www.w3.org/2003/01/geo/wgs84_pos#">
  <geo:Point>
    <geo:lat>55.701</geo:lat>
    <geo:long>12.552</geo:long>
  </geo:Point>
</rdf:RDF>
```

## Documents

- An **RDF vocabulary for WGS84 latitude/longitude/altitude markup** (namespace uri: [http://www.w3.org/2003/01/geo/wgs84\\_pos#](http://www.w3.org/2003/01/geo/wgs84_pos#))
- **2003-01-10 #rdfig links**, including test data
- **RDFIG Geo vocab workspace** (this document)

## Status

Regarding the [http://www.w3.org/2003/01/geo/wgs84\\_pos#](http://www.w3.org/2003/01/geo/wgs84_pos#) vocabulary: it is pretty simple and should hopefully stay that way, ie. short and simple enough to memorise and use. There may be some need to extend it, based on deployment experience, test cases etc. Time will tell.

Following the RDF Calendar approach, the idea for managing this namespace is roughly that...

- we announce all changes to the schema in **#rdfig**
- if anyone screams, within a week or so, we'll back out the changes (for further discussion)

If the last modified dates below are more than a few months old, active developments have likely ceased. *If things ever actually stabilize, we'll change this status message.*

## Meetings and Discussion

Interested RDFIG members meet occasionally in the **#rdfig** IRC channel on freenode (formerly OpenProjects). The **IRC logs** and **weblogs** generally serve as meeting records. At the time of writing, no meetings are scheduled. For related work and further discussion and collaboration, see the **GeoInfo** entry in the **ESW Wiki**.

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**Dan Brickley**

\$Id: HEADER.html,v 1.34 2003/04/03 00:30:01 danbri Exp \$

## recent changes

\$Log: HEADER.html,v \$

Revision 1.34 2003/04/03 00:30:01 danbri  
removed related links; linked to Wiki instead

Revision 1.33 2003/02/19 00:40:10 danbri  
removed SuckyCaps from Grub[*Ss*]treet (even if it is WikiBased :)

Revision 1.32 2003/01/11 19:02:23 danbri  
Updated datatypes section, now that datatyping has been removed from the schema.

Revision 1.31 2003/01/11 12:27:52 danbri  
Added link to 2.2M Danish addresses.

Revision 1.30 2003/01/11 12:09:12 danbri  
Added Sean Palmer's work on computing distances in RDF, and his infomesh-geo schema.

Revision 1.29 2003/01/11 12:03:33 danbri  
Added link to Sean Palmer's 'geo' URN proposal.

Revision 1.28 2003/01/11 11:19:58 danbri  
Revised the note re whitespace to mention use of RDF datatyping, and to discourage use of whitespace. This should be re-organised to separate the two issues. Also noted need for clearer advice on the whitespace issue.

Revision 1.27 2003/01/11 10:57:40 danbri  
Added final '#' to namespace uri:ref in one place that I missed yesterday.

Revision 1.26 2003/01/11 01:23:25 danbri  
Added DAML Geofile data.

Revision 1.25 2003/01/10 23:05:49 danbri  
Changed to say: \*An\* RDF Geo vocab... (there will doubtless be others).

Revision 1.24 2003/01/10 22:52:40 danbri  
Fixed a bug in the identity reasoning section ('alt' was omitted from the identity rules). Added a paragraph contrasting RDF and XML schema systems.

Revision 1.23 2003/01/10 22:33:54 danbri  
Added example snippet. Also Syndic8 Geo metadata maker.



Revision 1.22 2003/01/10 21:31:43 danbri  
Swapped a couple of paragraphs around, fixed some markup bugs and added a comment explaining the role of rdfs:domain.

Revision 1.21 2003/01/10 21:28:29 danbri  
Re-organised the page, and added some more detailed description of the Point/lat/long/alt design, mentioning identity rules for the Point class and the possible use of OWL to clarify the design.

Revision 1.20 2003/01/10 19:53:43 danbri  
Added DCMI Point Encoding Scheme.

Revision 1.19 2003/01/10 19:46:54 danbri  
Adding final '#' to geo vocab namespace uriref, for consistency with schema.

Revision 1.18 2003/01/10 19:45:28 danbri  
Added link to Syndic8 metadata spec.

Revision 1.17 2003/01/10 17:58:22 danbri  
Added a link to GML 2.0, Simon Cox et al. for OGC., Feb 2001.

Revision 1.16 2003/01/10 17:50:22 danbri  
Added Muxway links, from Joshua Schachter.

Revision 1.15 2003/01/10 17:45:20 danbri  
Added @semantics link from Alberto.

Revision 1.14 2003/01/10 16:51:46 danbri  
Added streetmap Perl module, and reference to xmethods.net web service directory.

Revision 1.13 2003/01/10 16:43:03 danbri  
Added GeoURL location/add yourself page, NVML and DCMI Box Encoding Scheme.

Revision 1.12 2003/01/10 16:09:45 danbri  
Added Spacenamespace sample data from Jo Walsh, and ptr to PostGIS docs.

Revision 1.11 2003/01/10 14:15:14 danbri  
Noted that OSGB FAQ includes pointers to conversion code.

Revision 1.10 2003/01/10 14:13:05 danbri  
Added Garmin, UK waypoints and OS links.

Revision 1.9 2003/01/10 12:50:21 danbri

added previous cvs history, so you can see how busy I've been...

revision 1.8

date: 2003/01/10 12:48:14; author: danbri; state: Exp; lines: +8 -1  
added blogmapper and rdfmap links

revision 1.7

date: 2003/01/10 12:42:05; author: danbri; state: Exp; lines: +4 -1  
added rdfmap

revision 1.6

date: 2003/01/10 12:37:16; author: danbri; state: Exp; lines: +27 -8  
added Status info

revision 1.5

date: 2003/01/10 12:30:23; author: danbri; state: Exp; lines: +3 -1  
added opengis consortium

revision 1.4

date: 2003/01/10 11:59:03; author: danbri; state: Exp; lines: +3 -2  
fixed buglet in vocab, added more wgs links

revision 1.3

date: 2003/01/10 11:46:43; author: danbri; state: Exp; lines: +4 -4  
added more links

revision 1.2

date: 2003/01/10 11:40:50; author: danbri; state: Exp; lines: +5 -5  
added more links

revision 1.1

date: 2003/01/10 11:28:17; author: danbri; state: Exp;  
first cut at contextual overview doc

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