

Galway, Ireland



RDFa in Drupal

•

What it means for D7 theming

•

**how to add
semantic goodness
to D6**

•

and why it matters

or

**Everything you wanted to know about
RDFa
but didn't know how to ask**

Overview of the Semantic Web, Drupal, and RDFa

RDF is Resource Description Framework, a way of breaking down any information into statements made up of subject, predicate, and object— each with an unambiguous URI.

RDF is coming first to Drupal as **RDFa**, inline markup of content, which puts the theme layer front and center of ushering in the Semantic Web.

A note from your presentation software

This guy tried to make the next 23 slides a sentence each from the session proposal.

He hoped no one would notice.

I deleted them.

Sincerely,
OpenOffice

First important point about RDFa

Nobody knows what the ***a*** stands for.

The presentation software needs to interject

RDFa stands for

Resource **D**escription **F**ramework in **a**tttributes

The Promise of RDF

“In a nutshell, the goal is to give true meaning to Drupal's data. Drupal is capable of collecting and presenting a lot of data, in no small part thanks to CCK, now Fields in Core for Drupal 7. This data is still meaningless in the Semantic Web sense because other computer agents can't make sense of the data that Drupal presents.”

“This Web of Data promises to be browsable just like a huge database, e.g. by means of query languages for RDF such as SPARQL (the name similarity with SQL is not a coincidence).”

2001 January 15

“Today, drop.org announces the release of Drupal 1.00 [...]. Drupal is a full-featured content management/discussion engine using Apache/PHP/MySQL and suitable to setup a news-driven community or portal site [...]. Current features include discussion forums, web-based administration, theme support, an open submission queue, content management, a modularized design, [...] backend/headline generation (RSS/RDF) and much more.”

<http://buytaert.net/happy-eighth-birthday-drupal>

Drupal's long, checkered past with RDF

In the year 2000, on May 18, in the first commit to the CVS repository that still holds the Drupal project — back when Drupal was called drop — Drupal founder Dries Buytaert included a file called **rdf.php**.

A month later it was replaced
with a general framework geared to
non-semantic RSS XML.

I mean nothing without human provided content



Other web sites don't understand me
text and presentation markup

displayed by many machines, read by few

only people understand my output
When I want data I screen scrape

It shouldn't be this hard.

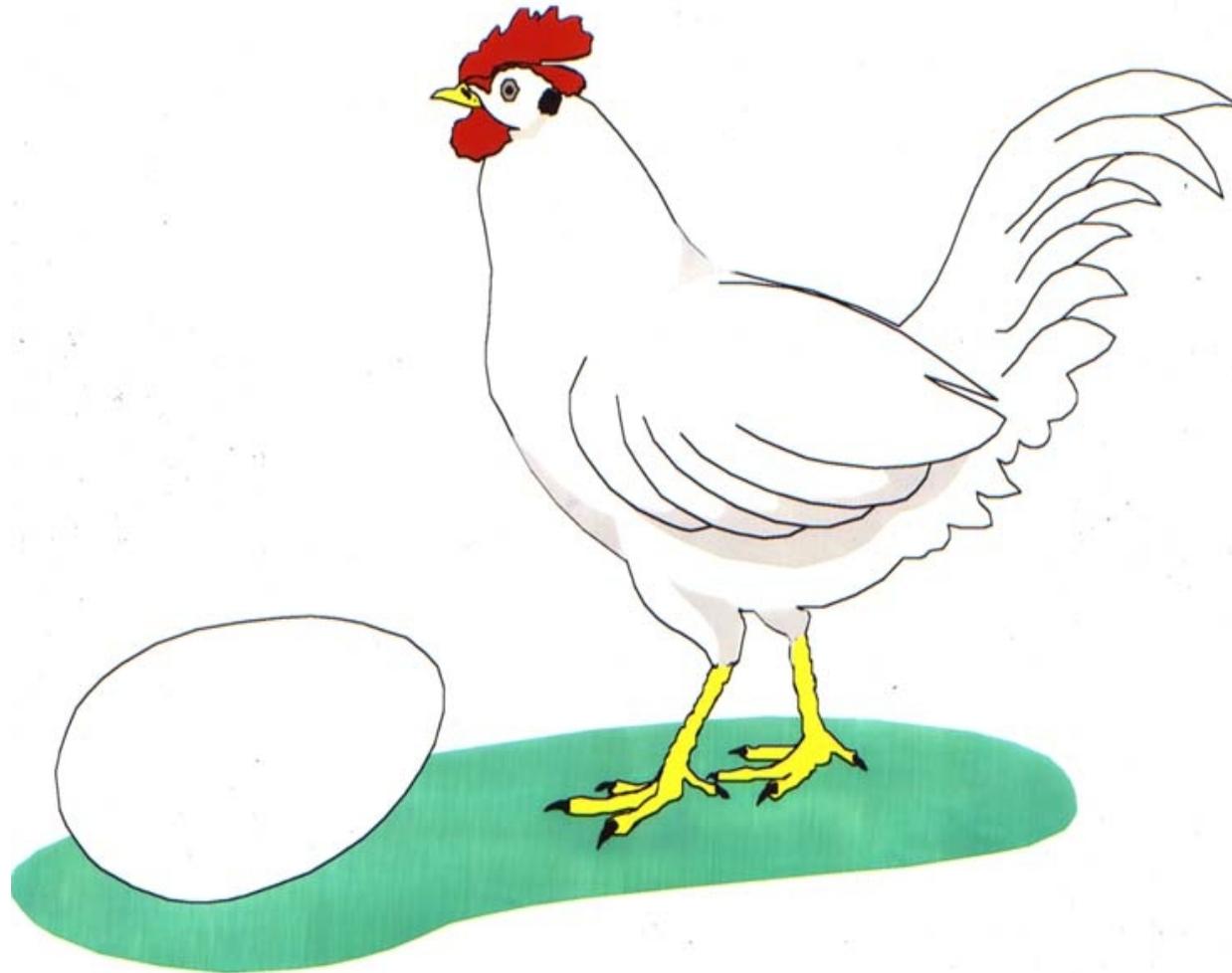
Transforming the existing web into a semantic web

web plumbing 101

by Eran Shir & Jon Aizen, Dapper



Which will come first?



As long as people had to handcode HTML to **blog** and **comment**, there was no **interactive web**.

As long as people have to painstakingly make **meaning** of their information machine-readable, there will be no **semantic web**.

Enter the Heroes

Arto Bendiken

<http://ar.to>

RDF, SPARQL, Exhibit modules

with, on RDF module

Miglius Alaburda, Ben Lavender,
Jeff Miccolis, Frank Febbraro

a couple boosters

Boris Mann

<http://bmannconsulting.com>

Dries Buytaert

<http://buytaert.net>

And the one who answered the call



Stéphane Corlosquet

scor

<http://openspring.net>

scor has the coolest modules

as well as the coolest username

evoc

RDF External Vocabulary Mapper provides a way to import external RDF ontologies into Drupal for use by other modules (getting to that).

Out of the box, this module pulls in the Dublin Core, Friend-of-a-Friend, and SIOC ontologies. You can then import any ontology RDF Calendar ontology, you can import it using this module, then it will be available to the RDF CCK module. Out of the box, this module pulls in the Dublin Core, Friend-of-a-Friend, and SIOC ontologies.

There is of course one more
indispensable party we can't forget.

The Drupal Community



Let's see RDFa in action.

Web site without RDFa.



[Blog](#) [Notes](#) [About](#) [Contact](#)

May
13
01:10

Half way through the RDF code sprint - Google Announces Support for RDFa

By: Stephane Tags: code sprint drupal Planet Drupal RDFa

We're half way through the sprint and we just heard that **Google has announced support for RDFa**. What a coincidence, surely another sign proving Drupal's heading in the right direction! Now is time for some update on the sprint.

During day 1, we decided to split the group into two in order to enable some parallel development and to make use of the 2 main skills we had at hand: RDF semantics and Drupal coding.

[Add new comment](#) [Read more](#) 1 attachment

May
06
10:39

New book - Drupal 6 Social Networking: Communicating with Users

By: Stephane

Our users can communicate with one another, which is great, but quite often as an administrator the need may arise for us to communicate with a user or



latest blog posts

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- New book - Drupal 6 Social Networking: Communicating with Users
- RDFa in Drupal: Bringing Cheese to the Web of Data
- Sponsor the RDF

Web site with RDFa.



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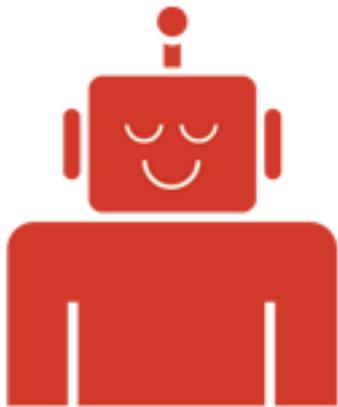


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Robot Food

RDFa makes sense to computers. Honest.



Boris Mann knows how to cook to keep robots happy.

So... not meant to be read by people.

The screenshot shows a web browser window with a dialog box titled "Fuzz Example Triple Display". The dialog box contains the following text:

Linked Data found in web page

```
<http://openspring.net/blog/2009/03/20/screencast-on-rdfa-in-drupal-examples-and-use-cases>
<http://purl.org/dc/terms/created>
  "2009-03-20T20:01:28-05:00" .

<http://openspring.net/blog/2009/03/20/screencast-on-rdfa-in-drupal-examples-and-use-cases>
<http://purl.org/dc/elements/1.1/title>
  "screencast on RDFa in Drupal - examples and use cases" .

<http://openspring.net/blog/2009/03/20/screencast-on-rdfa-in-drupal-examples-and-use-cases>
<http://rdfs.org/sioc/ns#has_creator>
  <http://openspring.net/users/stephane> .

<http://openspring.net/blog/2009/03/20/screencast-on-rdfa-in-drupal-examples-and-use-cases>
<http://xmlns.com/foaf/0.1/maker>
  <http://openspring.net/users/stephane> .

<http://openspring.net/blog/2009/03/20/screencast-on-rdfa-in-drupal-examples-and-use-cases>
<http://purl.org/dc/elements/1.1/creator>
  <http://openspring.net/users/stephane> .

<http://openspring.net/blog/2009/03/20/screencast-on-rdfa-in-drupal-examples-and-use-cases>
<http://purl.org/dc/elements/1.1/subject>
  "drupal" .
```

The background shows a blog post from May 13, 2009, at 01:10, by Stephane. The post title is partially visible as "posts" and "h the". The author's name "By: Stephane" is visible at the bottom left. The post content includes "Bringing Cheese to" and "with".

But computers can do cool things with it.

RDFa in Drupal
Examples and Use Cases

<http://groups.drupal.org/node/20167>

roll tape

Another note from the presentation software

I'm waiting for web 7.0, like lawnmower man.

What Dries wants.

1. Dublin core.
2. SIOC.
3. Match up RDFa output options to fields (with CCK in core)
4. Export straight RDF also for same data
5. Drupal 8: Import RDF!

The Sprint



Map?



One group focused on figuring out the best ontology mappings for standard Drupal content.

Guided by Mark Birbeck



Your *continued donations* keep Wikipedia running!

 [Log in / create account](#)

[article](#)

[discussion](#)

[edit this page](#)

[history](#)

RDFa

From Wikipedia, the free encyclopedia

RDFa (or Resource Description Framework - in - attributes) is a set of extensions to [XHTML](#) which is now a [W3C](#) Recommendation. RDFa uses attributes from XHTML's meta and link elements, and generalises them so that they are usable on all elements. This allows annotating XHTML markup with semantics. A simple mapping is defined so that [RDF triples](#) may be extracted.

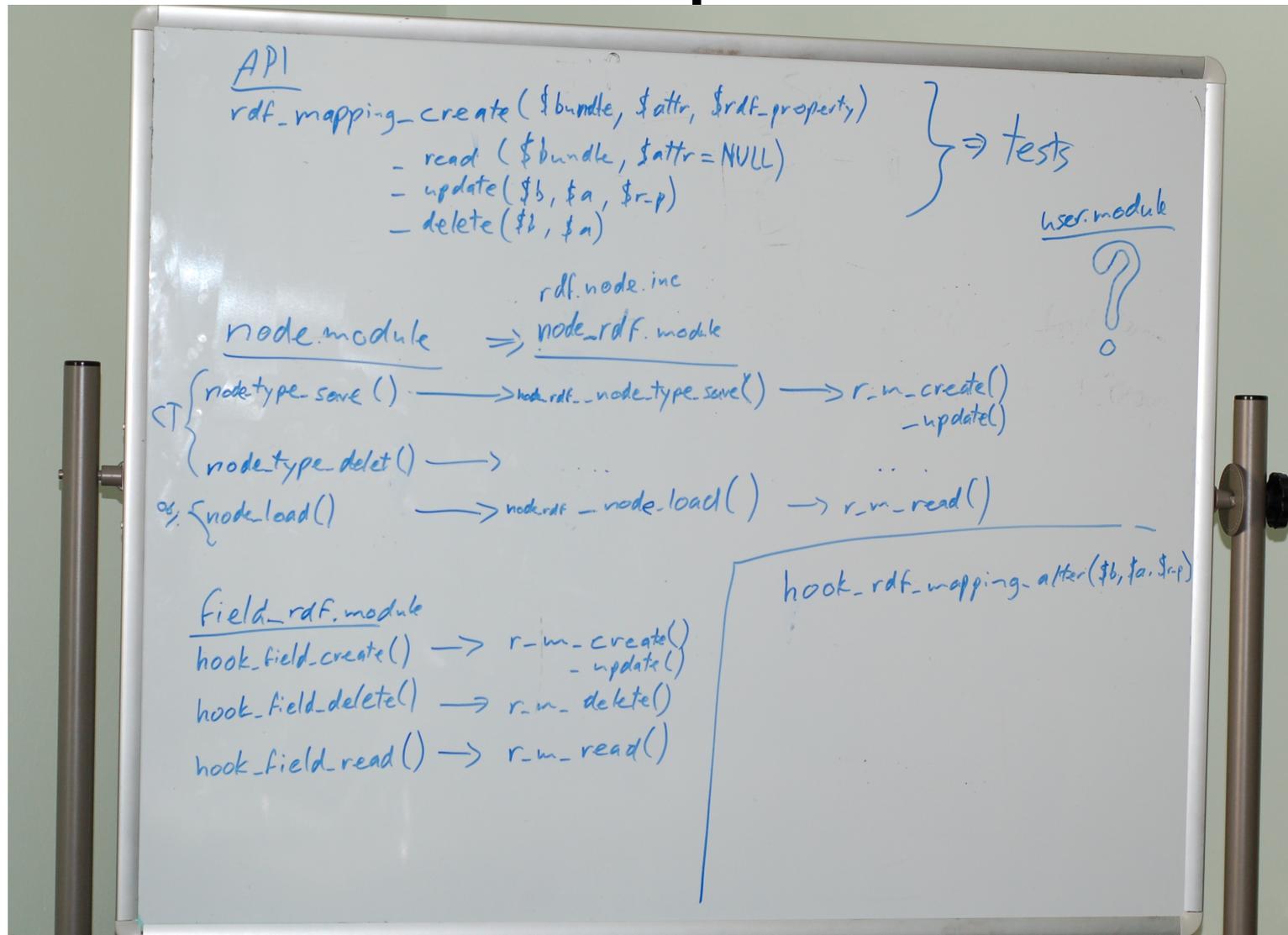
History

[\[edit\]](#)



RDFa was first proposed by [Mark Birbeck](#) in the form of a W3C note entitled XHTML and RDF,^[3] which was then presented to the Semantic Web Interest Group at the W3C's 2004 Technical Plenary.^[3] Later that year the work became part of the sixth public Working Draft of XHTML 2.0.^[4] Although it is generally assumed that RDFa was originally intended only for XHTML 2, in fact the purpose of RDFa was always to provide a way to add a metadata to *any* XML language. Indeed, one of the earliest documents bearing the *RDF/A Syntax* name, has the sub-title *A collection of attributes for layering RDF on XML languages*.^[5] The document was written by Mark Birbeck and [Steven Pemberton](#), and was made available for discussion on October 11, 2004.

Map!



In the other group we didn't worry about what ontologies would do what mapping, but how anyone could add any mapping.

```

<?php
    $type->rdf_mapping = array(
        'rdftype' => array('sioc:Item', 'foaf:Document'),
        'title'   => array('dc:title'),
        'created' => 'dc:created',
        'changed' => 'dc:modified',
        'body'    => 'content:encoded',
        'uid'     => 'sioc:has_creator',
        'name'    => 'foaf:name',
    );
?>

```

Modules implementing a bundle can define the mapping for its fields:

```

<?php
/**
 * Implementation of hook_rdf_mapping().
 */
function hook_rdf_mapping() {
    return array(
        'blog' => array(
            'rdftype' => 'sioc:Post',
            'title'   => array('dc:title'),
            'created' => array(
                'property' => array('dc:date', 'dc:created'),
                'datatype' => 'xsd:dateTime',
                'callback' => 'date_iso8601',
            ),
            'name'    => array('dc:creator', 'foaf:name'),
            'uid'     => 'sioc:has_creator',
        )
    );
}
?>

```

The 'created' field contains a more complex array because it needs to be output as iso8601 and with a specific datatype.

What is left to do?

Lots. While Drupal is released, “when it is ready” we only have until the end of August to get all the incredible features we want to see in Drupal 7, of which RDFa is only one interrelated part.

http://drupal.org/project/issues/search/drupal?issue_tags=RDF

RDFa touches parts all over Drupal

- CCK
 - Body, title, username, date as fields?
 - User interface in core?
- Taxonomy as Fields
- Comments as Fields?
- User Profiles using fields?
- What content types and field and vocabulary setup ships in a core profile?

What are we all here for again?



Theming!

- drupal_render
- theme_username

Questions?



```
node_load() // $node->rdf_mappings = rdf_get_mappings($node)
```

```
template_preprocess_node() // $variables[rdf_type] = ...
```

```
<div id=node-123>
```

```
template_pre_search()  
search_iter.tpl.php
```

Your friendly presentation software suggests

that you just ask the Internet.

The End



Everything mentioned here

<http://agaric.com/rdfa>