



Fig. 1



Fig. 2



Fig. 3

## 1. Vocabularies in VOResource

(cf. Fig. 1)

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(cf. Fig. 2)

- A system for managing vocabularies
- content\_level
- content\_type
- date\_role
- relationship\_type

(cf. Fig. 3)

## 2. Background

VOResource 1.0 had some “term lists” defined in its schema.

That was a pain for maintenance.

(Though “XML Schema Versioning Policies” will help).

So: VOResource 1.1 will have four vocabularies.

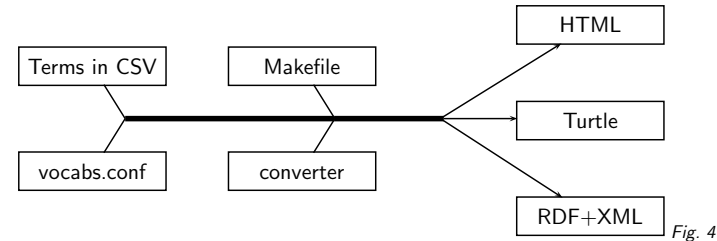


Fig. 4

## 3. Managing Vocabularies

This takes up a system devised by Norman Gray for Datalink, adding:

- Support for multiple vocabularies
- Metadata definition file
- Support for deprecated synonyms

(cf. Fig. 4)

The net effect is that from a fairly simple input, a “rich” semantic resource is created, which supports date-based versioning and adapts to client requests.

## 4. .htaccess Automagic

On the server end, things are arranged such that requesting the base vocabulary URI gives a redirect to the current version (so we don’t need to clobber old versions when we issue new ones), requesting the the vocabulary URI gives a (more or less nicely) formatted HTML rendering of the vocabulary, and clients that want Turtle or RDF+XML can get that from the vocabulary URI as well.

```

$ url=http://docs.g-vo.org/vocab-test/date_role
$ curl -s $url | grep moved
<p>The document has moved <a href="http://docs.g-vo.org/vocab-test/date_role/">here</a>.</p>
$ curl -sL $url | xmlstarlet fo | grep -A 4 creation
<td class="predicate">creation</td>
<td class="label">Creation</td>
<td class="description">The date that the resource was created
(deprecated in favour of Created)</td>
<td class="parent">#Created</td>
<td class="preferred">#Created</td>
$ curl -sL -H "Accept: text/turtle" $url | head -5
@base <http://www.ivoa.net/ref/date_role>.
@prefix : <#>.

@prefix dc: <http://purl.org/dc/terms/> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
  
```

## 5. Input Format

Vocabulary information is input in a simple CSV format, giving term, subproperty level, label, description, synonym

```
Copyrighted;1;Copyrighted;"The specific, documented date at  
Collected;1;Collected;"A (representative) date at which the  
representative;1;Representative;"A rough indication of the  
Created;1;Created;"The date the resource itself was put tog  
creation;1;Creation;The date that the resource was created
```

This lets you code two semantic relationships:

- Hyponym ("is-a"): list the more specialised term below the parent and increase the level
- Synonym ("use-instead"): new term (or URI) in column 5

Technically, our hyponymy is realised as `rdfs:subPropertyOf` triples, whereas for synonymy, we're currently using `owl:equivalentProperty` together with `owl:DeprecatedProperty`. I have little instinct for whether this is a clever thing to do.

## 6. VOResource Vocabularies

Right now, find them off <http://docs.g-vo.org/vocab-test>

## 7. Questions

- Will this tooling work for you?
- What policy should we have for uploading vocabularies (WD? PR? REC?)
- Should we have a policy for keeping source documents?
- What policy should we have for updating vocabularies once they're on `ivoa.net`?

Join the fray as we discuss these vocabularies on the Registry list!