

HARMONY

Notes from the Semantic Web Working group

(WHAT'S HARMONY?)



HARMONY

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- 10 giorni 8 ore 27 minuti
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HARMONY

Collezione

Amore per sempre

*Una perfetta armonia di passione
e romanticismo per grandi,
indimenticabili storie d'amore.*

Le nostre collane

[Febbraio](#)[Marzo](#)[Aprile](#)[Maggio](#)

(WHAT'S HARMONY?)



WHAT'S HARMONY?



MA HARMONY?)



MA HA NY?)



SEMANTIC WEB WG: WHAT

Queries/RDF/
Integration

Semantics/
reasoning

**[http://sourceforge.net/apps/mediawiki/biopax/index.php?
title=Semantic web/linking/CVs](http://sourceforge.net/apps/mediawiki/biopax/index.php?title=Semantic_web/linking/CVs)**

SEMANTIC WEB WG: WHAT



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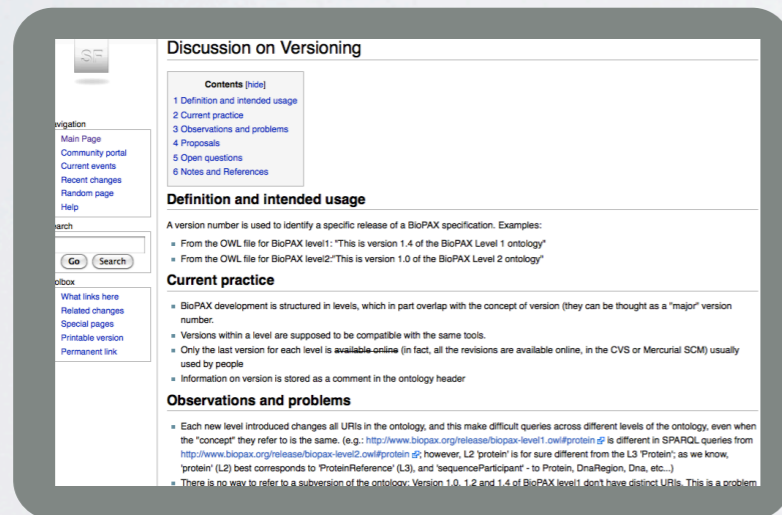
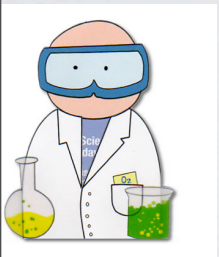
SEMANTIC WEB WG: HOW

Problem/
issue/
idea

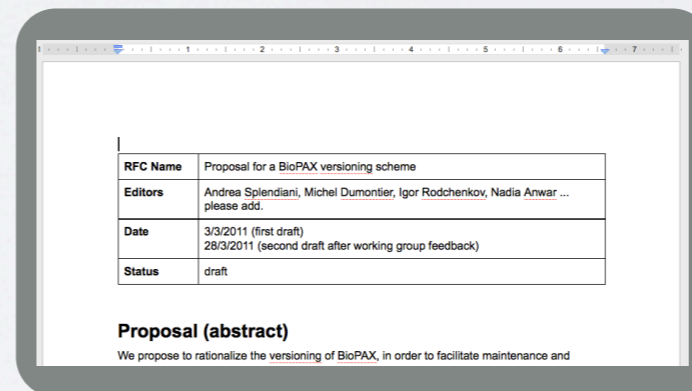
Proposal Life Cycle

Proposal:

- actions for “next” release
- notes for future developments



wiki:
**requirements &
ideas**



GoogleDocs:
**interactive
discussion**

PROPOSALS

Proposal	Status
Versioning	GoogleDoc draft
5 star	GoogleDoc draft
URIs	GoogleDoc draft
Standardization	concept
Shared relations	concept/discussion
Metadata	concept/disucssion

VERSIONING

- URL for BioPAX which allows versioning tracking
- Distinction between URL of the BioPAX specs, and URL of the BioPAX entities

Want to know more ?

VERSIONING

- URL for BioPAX which allows versioning tracking
- Distinction between URL of the BioPAX specs, and URL of the BioPAX entities

To the following model:

<http://www.biopax.org/specification/level3/biopax.owl> -> latest (level3)

<http://www.biopax.org/specification/level3/v1/biopax.owl>

<http://www.biopax.org/specification/level3/v2/biopax.owl>

Want to know more ?

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Example of a possible header:

To the following model:

<http://www.biopax.org/specification/biopax-level3/v1/>
<http://www.biopax.org/specification/biopax-level3/v1/>
<http://www.biopax.org/specification/biopax-level3/v1/>

```
<owl:Ontology rdf:about="">
  <owl:versionInfo>BioPAX version 3.2 day/month/year</owl:versionInfo>
  <owl:priorVersion
    rdf:resource="http://www.biopax.org/specification/biopax-level3/v1/" />
  </owl:priorVersion>
  <owl:backwardCompatibleWith
    rdf:resource="http://www.biopax.org/specification/biopax-level3/v1/" /
  </owl:backwardCompatibleWith>
  <owl:incompatibleWith
    rdf:resource="http://www.biopax.org/specification/biopax-level2/" /
  </owl:incompatibleWith>
  <owl:incompatibleWith
    rdf:resource="http://www.biopax.org/specification/biopax-level1/" /
  </owl:incompatibleWith>
</owl:Ontology>
```

Want to know more ?

VERSIONING

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To the following

<http://www.biopax.org/specification/biopax-level1.owl>

<http://www.biopax.org/specification/biopax-level1/protein>

<http://www.biopax.org/specification/biopax-level2.owl>

BioPAX Level1:

URI of the ontology: <http://www.biopax.org/specification/biopax-level1.owl>

URI of the protein class:

<http://www.biopax.org/specification/biopax-level1/protein>

BioPAX Level2:

URI of the ontology: <http://www.biopax.org/specification/biopax-level2.owl>

URI of the protein class:

<http://www.biopax.org/specification/biopax-level2/protein>

ur</owl:versionInfo>

pax-level3/v1/"/>

pax-level3/v1/"

Want to know more ?

org/specification/biopax-level2/"

org/specification/biopax-level1/"

5 STAR MODEL

- Inspired by OpenData projects.
- How much is a BioPAX version Semantic Web friendly ?
- Soft evaluation (1 to 5 stars) depending on the compliance to a set of desired characteristics (in preparation)

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the 5 stars of open linked data

While perusing the [minutes](#) of today's [w3c egov](#) telecon I noticed mention of Tim Berners-Lee's [Bag of Chips](#) talk at the [gov2.0 expo](#) last week in Washington, DC. I actually enjoyed the talk not so much for the bag-of-chips example (which is good), but for the examination of Linked Data as part of a continuum of web publishing activities associated with gold stars, like the ones you got in school. Here they are:

- ★ make your stuff available on the web (whatever format)
- ★★ make it available as structured data (e.g. excel instead of image scan of a table)
- ★★★ non-proprietary format (e.g. csv instead of excel)
- ★★★★ use URLs to identify things, so that people can point at your stuff
- ★★★★★ link your data to other people's data to provide context

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0 star

An export which
- makes use

the 5 stars of open linked data

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*) 1 star

An export is not
- passes the

★ make your stuff available on the web (whatever format)

★★ make it available as structured data (e.g. excel instead of image scan of a table)

***) 2 star

An export is not
- it passes the

★★★ non-proprietary format (e.g. csv instead of excel)

★★★★ use URLs to identify things, so that people can point at your stuff

★★★★★ link your data to other people's data to provide context

- it provides [URIs](#) for all identifiable entities, and these follow standard [URI](#) values.

- it provides [URIs](#) that based on their domain name (basic provenance).

URIS

- Coherent usage of URIs in BioPAX
- Should URIs be resolvable ?
- Should they resolve to what ?
- Is there a canonical form for URIs ?
- When do URIs change ?

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- Coherent usage of URIs in BioPAX
- Should URIs be resolvable ?
- Should they resolve to what ?
- Is there a canonical form for URIs ?
- When do URIs change ?

they are essentially bank notes. It is not important that these URIs are consistent across resources.

We propose that URIs for BioPAX entities should follow the same principles (see 5star model RFC):

- URIs should be **unique**. In other words, the same URI cannot be used to denote different entities. If for instance a pathway database export the same protein for two distinct organisms, two different URIs should be used.
- As a consequence, URIs should change **(only?)** when the entity they refer to changes.
- URIs should be **persistent**
- URIs should be **URLs resolvable over http**

Why should we have this constraints? Why not just "URIs should be resolvable"? My understanding of the BioPAX format is that it is not supposed to be read and written by humans and that Web browsers are not the preferred tools to open such files.

- For terminologies and identifiers which are coming from other resources, where these provide stable URIs, the original URIs should be used (e.g.: Uniprot, OBO, ...)
- For other entities (and with the exception of utility classes) data providers should:

export
5 star
date a
least



That i
we sp
touch
propo
metad
propo
writing



Do yo
metad
propo
worth

IN PREPARATION

- Standardization:
 - `rdfs:label`, `dc:title`, instead of `biopax:name` ? ...
- Shared relation:
 - Can we define “participates in” and similar relations across standards ?
- Metadata:
 - Provenance, (Versioning), ...