

# SemanticWeb.org

## Interoperability Considerations

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## General interoperability considerations

- Basic Idea: Use Semantic Web technology to allow different Web sites to „work together“.
- Interoperability could cover re-use and integration of other sites' *models, data, and functionality*.
- *Presentation layer* components (e.g. stylesheets for agreed-on RDF/XML structures) may be considered, too.

## SemanticWeb.org

- SemanticWeb.org is (soon again ;) the Semantic Web community portal.
- The new (RDF-enhanced) site will provide information about SemWeb events, people, tools, organisations, projects, and other related resources.
- Both instance data and model information can be added, modified, extended, and exported online.

## RDF/XML views of local data

- Each portal object (page, channel, blog post, user, vocabulary, SKOS concept, resource description, ...) can be serialized as RDF/XML.
- Resource Description Discovery (RDD) will be enabled by <link /> tags in XHTML, HTTP headers (X-Metadata-Location) and support for URIQA's MGET.
- Direct serving of content-negotiated XHTML vs RDF/XML is considered bad practice (URI overloading etc.), but HTTP redirects may be triggered on certain Accept-headers instead.

## Integration of remote data

- The site has an „add url“ feature to add remotely maintained sources to the portal.
- Information from remote sources will be updated via an RDF crawler (scutter).
- The final RDF store (YARS) is going to support HTTP PUT and POST for direct integration of data.

## Data access interface

- The final portal is going to provide an HTTP-based query interface (probably SPARQL protocol/query language compliant)
- Together with the portal's RDD features, it will be possible to retrieve Concise Bounded Descriptions (CBDs) of resources for re-use in other environments.

## Ontology import and export

- The portal system has a built-in web-based vocabulary editor and publisher.
- RDFS and OWL term sets can be imported, mixed, and exported.
- Annotation properties are used to add machine-readable presentation information for classes (e.g. re-usable views or forms).



## Possible extensions

- Add support for *functionality* re-use (e.g. facilitated sign-up à la foafnet)
- The views are currently generated via PHP code (ontology-guided, though). For improved interoperability, it could make sense to completely separate the presentation layer from program code (e.g. by a stylesheet-like approach and by formally describing the way resource descriptions should be displayed)

## Appendix: SW.org Architecture

