

offered by W3C<sup>31</sup> – this service not only validates your files for syntactic correctness but also provides a visualization of the existing triples. Also, at this stage, you may be able to experiment with some of the tools that allow you to import data from semistructured sources.

At the end of this step, you should be able to produce the following:

- The full OWL ontology
- Instances of the ontology, described in RDF
- A report describing the scope of the ontology and the main design decisions you made while modeling it.

## Part II. Profile Building with SPARQL Queries

Here you will use query facilities to extract relevant parts of your ontology and data. For this you need some way of storing your ontology in a repository that supports both query and reasoning facilities. You may use the Sesame RDF storage and query facility,<sup>32</sup> which comes bundled with an OWLIM reasoner. We have also found that the Joseki Sparql Server is a nice starting point as it provides a built-in web server.

The first step is to upload your ontology (as RDF/XML or Turtle) and associated instances to the repository. This may involve some installation effort.

Next, use the SPARQL query language to define different user profiles, and use queries to extract the data relevant for each profile.

In the example of modeling television programs, you may choose to define viewing guides for people with particular preferences (sports, current affairs) or viewers of particular age groups (e.g., minors), to collect data from multiple television stations (even across nations), to produce presentations for access over broadband or slower mobile connections, and so on.

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<sup>31</sup>[www.w3.org/RDF/Validator/](http://www.w3.org/RDF/Validator/).

<sup>32</sup>[www.openrdf.org/](http://www.openrdf.org/).