RDF data published on the Semantic Web.[18] Prefix.cc[19] lists the most commonly used namespace prefixes used on the Semantic Web. These prefixes link to the corresponding ontology they represent.

It is only rarely the case that existing ontologies can be reused without changes. Typically, existing concepts and properties must be refined (using owl:subClassOf and owl:subPropertyOf). Also, alternative names must be introduced which are better suited to the particular domain (e.g., using owl:equivalentClass and owl:equivalentProperty). Also, this is an opportunity for fruitfully exploiting the fact that RDF and OWL allow private refinements of classes defined in other ontologies.

The general question of importing ontologies and establishing mappings between them is still wide open, and is considered to be one of the hardest Semantic Web research issues.

7.4 Semiautomatic Ontology Acquisition

There are two core challenges for putting the vision of the Semantic Web into action.

First, one has to support the reengineering task of semantic enrichment for building the web of metadata. The success of the Semantic Web greatly depends on the proliferation of ontologies and relational metadata. This requires that such metadata can be produced at high speed and low cost. To this end, the task of merging and aligning ontologies for establishing semantic interoperability may be supported by machine learning techniques.

Second, one has to provide a means for maintaining and adopting the machine-processable data that are the basis for the Semantic Web. Thus, we need mechanisms that support the dynamic nature of the web.

Although ontology engineering tools have matured over the last decade, manual

[18] http://sindice.com.
[19] http://prefix.cc.