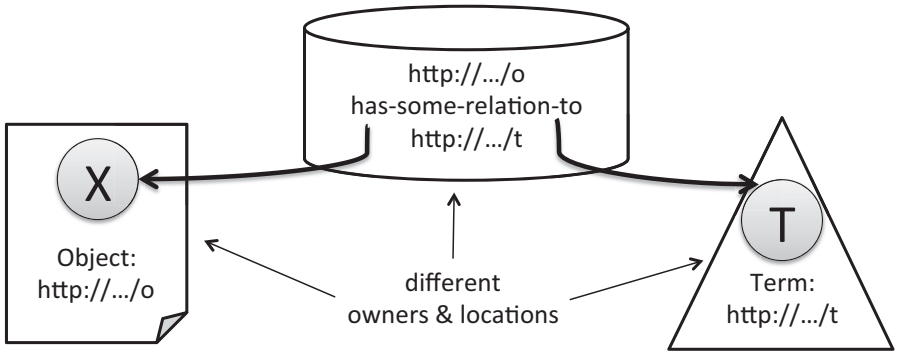

Figure 1.2: Web architecture for linked data

1.1.6 How to Get There from Here

Of course, some significant steps are required in order to make the above vision and architectural principles an implemented reality:

1. We must agree on standard syntax to represent data and metadata.

2. We must have sufficient agreement on the metadata vocabularies in order to share intended semantics of the data.

3. We must publish large volumes of data in the formats of step 1, using the vocabularies of step 2.

Over the past decade (the earliest Semantic Web projects date from the last years of the twentieth century), substantial progress has been made on all three of these steps: the languages RDF, RDF Schema, and OWL (and their variations, such as RDFa, OWL2, etc.) have all acquired the formal support of the World Wide Web Consortium (W3C), elevating them to de facto standards on the web. Many thousands of vocabularies have been published in these formats[5] and convergence among these vocabularies is beginning to occur, both as a result of automated ontology mapping technology

[5] http://swoogle.umbc.edu/.