



Figure 1.4: A layered approach to the Semantic Web

- Upward partial understanding. The design should be such that agents fully aware of a layer should be able to take at least partial advantage of information at higher levels. For example, an agent aware only of the RDF and RDF Schema semantics might interpret knowledge written in OWL partly, by disregarding those elements that go beyond RDF and RDF Schema. Of course, there is no requirement for all tools to provide this functionality; the point is that this option should be enabled.

While these ideas are theoretically appealing and have been used as guiding principles for the development of the Semantic Web, their realization in practice has turned out to be difficult, and some compromises have needed to be made. This will become clear in chapter 4, where the layering of RDF and OWL is discussed.

Figure 1.4 shows the “layer cake” of the Semantic Web, which describes the main layers of the Semantic Web design and vision. At the bottom we find *XML*, a language