adopted standard(s). RIF is a step in this direction, but not yet at the same level of community agreement and adoption. Therefore, the chapter presents ideas at a generic level, and presents a number of concrete approaches.

Chapter Overview

Readers who are not comfortable with the notation and basic notions of predicate logic are advised to read some introductory chapters of logic books, like those listed at the end of this chapter. Alternatively, they may skip parts of sections 5.3 and 5.4.

- Section 5.2 provides an example using monotonic rules (that is, of the subset of predicate logic called Horn logic).

- Sections 5.3 and 5.4 describe the syntax and semantics of Horn logic.

- Section 5.5 discusses the relationship between OWL2 RL and rules.

- 5.6 presents the family of RIF dialects, with a focus on the logic-based languages.

- Section 5.7 describes SWRL as a way of combining rules with description logics.

- Section 5.8 briefly describes how rules can be modeled using SPARQL constructs.

- Section 5.9 describes the syntax of nonmonotonic rules, and section 5.10 presents an example of nonmonotonic rules.

- Finally, section 5.11 briefly describes RuleML, an ongoing activity for rule markup on the web with an open and experimental agenda that may feed into new standards in the future.