

ABSTRACT: In Semantic Web, the knowledge sources usually contain inconsistency because they are constantly changing and from different view points. As is well known, as based on the description logic of the Semantic Web, OWL is lack of the ability of tolerating inconsistent or incomplete data. Recently, the research in handling inconsistency in OWL becomes more and more important. In this paper, we present a paraconsistent OWL called quasi-classical OWL to handle inconsistency with holding important inference rules such as modus tollens, modus ponens, and disjunctive syllogism. We propose a terminable, sound and complete tableau algorithm to implement paraconsistent reasoning in quasi-classical OWL. In comparison with other approaches to handle inconsistency in OWL, our approach enhances the ability of reasoning by integrating paraconsistent reasoning with important classical inference rules.