

## **A comparative study on ontology development methodologies towards building semantic conflicts detection ontology for heterogeneous web services**

### **ABSTRACT**

Semantic conflicts detection is considered to be one of the essential steps that should be carried out effectively, in order to pave the way towards establishing semantic interoperability between heterogeneous Web services. To achieve that, ontology plays the backbone of the detection process, which required to be implemented in a high quality manner. However, choosing a methodology to build this ontology is very difficult, since a considerable number of methodologies have been emerged to guide the ontology development process. Therefore, this study aims at reviewing and comparing the most accepted and used methodologies, with the aim of choosing an effective methodology from ontology engineering perspective to be recommended and used for building semantic conflicts detection ontology. Furthermore, to provide some useful insights for both theoretical and practical purposes to help ontology developers to choose the right methodology and to advance the state of the art. The comparison was performed against the common ontology development life cycle. The result of this survey and comparison recommend a methodology called METHONTOLOGY to be used for implementing semantic conflicts detection ontology.

**Keyword:** Ontology development life cycle; Ontology engineering; Semantic conflicts detection; Semantic interoperability