

# SEMANTIC ANNOTATION & ONTOLOGY POPULATION

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## ABSTRACT:

This chapter deals with issues related to semantic annotation and ontology population within the framework defined by the Semantic Web (SW). The vision of the Semantic Web initiated in 1998 by Sir Tim Berners-Lee aims to structure the information available on the Web. To achieve that goal, the resources, textual or multimedias, must be semantically tagged by metadata so that software agents can exploit them. The idea developed in this chapter is to combine the information extraction (IE) tools with knowledge representation tools from the SW for the achievement of the two parallel tasks of semantic annotation and ontology population. The goal is to extract relevant information from the resources based on an ontology, then to populate that ontology with new instances according to the extracted information and finally to use those instances to semantically annotate the resource. Despite all integration efforts, there is currently a gap between the representation formats of the linguistic tools used to extract information and those of the knowledge representation tools used to model the ontology and store the instances or the semantic annotations. The stake consists in proposing a methodological reflexion on the interoperability of these technologies as well as designing operational solutions for companies and, on a broader scale, for the Web.