Abstract

This paper presents a geo-spatial domain ontology (CriSO) modeling approach, which is based on the RCC-8 model complemented by directional relations encoded by cone-shaped or alternatively, projection-based relations. Ontologies can be defined as a kind of semantic networks for the real world description, they are essentially graphs between concepts linked by relations such as is_a, has_a, part_whole. But the scope of geographic ontologies applied to sociocultural features requires to describe not only the geographic features, but also their spatial relationships. Usually, only topological relations are defined, but other spatial, geographic relations and cultural knowledge must be considered as well. Thus, CriSO allows to annotate, to organize data, to facilitate information retrieval by introducing a semantic layer in the on-based Knowledge Management Systems and to integrate the local knowledge in the cloud of the Linked Open Data.

Index Terms

Computer Science
Information Sciences
Keywords

Ontology, Geographic Ontology, Sociocultural Infrastructure, Knowledge Management Systems, Linked Open Data