A survey on ontology-driven geographic information systems


DOI: 10.1109/DICTAP.2014.6821679

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Abstract

Geographic Information Systems (GIS) have become widely used for capturing, storing, integrating, analyzing and displaying various types of geospatial data. They have been applied to several fields such as transportation, education, business, tourism, urban planning, etc. Nowadays, with the advancement of GIS technological tools in capturing and storing geographic data, it leads to the challenge in managing data from diverse sources and storing in different formats at different levels of detail. In another word, two or more applications sharing data that represent the same thing may cause different types of heterogeneity problems. To enable GIS interoperability and data management, ontologies which are considered as powerful tools for information sharing, information processing and information integration are utilized in this context. This paper discusses how ontologies can be employed to resolve heterogeneities in order to enhance interoperability and support geospatial data sharing and reuse as well as facilitate decision making in GIS domain. © 2014 IEEE.

Author Keywords

Data integration; Geographic Information Systems; Ontology

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Document Type: Conference Paper
Source: Scopus