

An Ontology of Place name for Information

Retrieval and Reasoning

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A frequently repeated factoid is that 80% of all digital data generated today includes geospatial reference. Even though digital maps and other cartographic products are directly geo-referenced with geographic coordinates, these geo-referenced data usually are limited to be used in experts or people who are trained. However, a large volume of the digital data that people are familiar with does not use coordinates but are indirectly geo-referenced with place names and other plain text descriptors of geographic objects and features, like address and postal codes. The place names are instinctive geospatial conception for people. At the same time, the place names are the names of the places which are complicated, diversified, ambiguous and multi-scaled geospatial objects. Therefore, there is a need to specify the place name to canonical and interchangeable geospatial knowledge. An ontology is a shared, formal conceptualization of a domain. Furthermore, the geospatial ontology is considered as a formal modeling of the geospatial world as this is experienced and conceptualized by non-experts. In this talk, an ontology of place name, encoding by GML (Geography Markup Language), is built by hyponymy of place-name's feature class. The ontology is represented by RDF (Resource Description Framework) and used for information Retrieval and reasoning.