A Database Perspective on Self-description and Discovery of Spatial Data

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Abstract

In the National Geospatial Data Infrastructure (NDGI) of Switzerland there exists a long tradition of documenting databases in a web-friendly way with a public repository of over 100 geospatial datasets. And in computer science there are best practices about

1. information modeling based on OOA, EAA, UML,

2. geospatial data modeling,

3. information extraction, and

4. search and geo-discovery.

My contribution mainly consists of following questions which arose when looking at the Linked Open Data (LOD) community in general and specifically at geospatial LOD:

1. What geospatial LOD and geospatial ontologies exist, which are established?

2. What are the quality criteria of (geospatial) LOD and ontologies?

3. Are these geospatial ontologies fit-for-use i.e. do they fulfill the mentioned quality criteria?

4. What's missing in geospatial LOD and ontologies (e.g. performance considerations ready for big data)?

5. What's the difference between…: a. LOD principles versus information integration [7]/database engineering? b. ontologies versus domain models (EAA/UML)? c. OWL versus deductive databases?

Going through these open questions, I hope to jointly get a better understanding about the domain and to provide and share input about future research and implementation directions by facilitating group discussions.