

Semantic Resources for the Geospatial Domain

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SUMMARY

Smart surveyors are aware of the potential of semantic resources. Within the FIG community, semantic representation often supplements geospatial representation, but you also find specific references to semantic technologies. For example, Mey et al (2020) among others introduce characteristics of the semantic web, including the notion of controlled vocabularies, which assist in providing interoperability among datasets in the surveying and the construction sector, and support a wider e-governance perspective.

Within the geospatial domain, such vocabularies have recently been developed and made available, namely the Geolexica of the ISO TC 211 Geographic information / Geomatics, as well as the OGC Definitions Server. The two standardization organisations have developed these resources to promote interoperability by providing easy access to the concepts and concept structures, which are applied in their standards.

These efforts are part of a more general trend, providing controlled vocabularies for the various domains of science. The AGROVOC of FAO, introduced by May et al (2020), the GEMET - GEneral Multilingual Environmental Thesaurus, and the STW Thesaurus for Economics, are among the about 100 vocabularies collected in the Basic Register of Thesauri, Ontologies & Classifications (BARTOC) .

For professionals and researchers it may be difficult to explore these vast and diverse semantic resources. Therefore, domain-specific entry points have been made in terms of LandVoc - the Linked Land Governance Thesaurus, as well as the Cadastre and Land Administration Thesaurus (CaLAtHe).

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The purpose of the paper is to provide a review of the mentioned semantic resources and to illustrate their use, e.g. for student and research projects and for national management of code lists. Concepts and concept structures are the basic elements of science. A dedicated use of the presented semantic technology and semantic resources will stimulate the scientific base of the surveying profession.

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