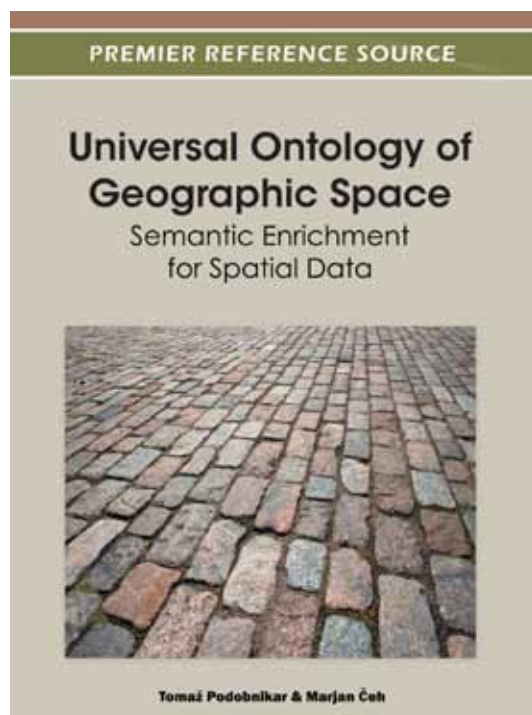


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Universal Ontology of Geographic Space: Semantic Enrichment for Spatial Data



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& Marjan Čeh (University of Ljubljana, Slovenia)

A universal approach to the ontology of geographic space has already been and is going to be a comprehensive task for establishing more effective spatial models. The concept of a universal spatial ontology should be independent of location, culture, and time. It should be fundamental and universal in the same way that the number π defines the ratio between the diameter and the circumference of a circle. The term “universal” therefore means all-embracing and for general propose.

Universal Ontology of Geographic Space: Semantic Enrichment for Spatial Data aims to escalate the current scope of research to support the development of semantically interoperable systems of geographic space. This reference will aid university lecturers and professors, students, researchers, developers of spatial applications.

Topics Covered:

- Automated generalization
- Benchmarking spatial semantic interfaces
- Data acquisition, Integration, and Interoperability based on universal ontology of geographic space
- GIS as spatial cognitive system
- Human–computer interaction (HCI) upgraded for spatial semantic content
- Information standards as ontology of GIS technology
- Integration of spatial concepts in natural languages
- Ontology authoring and copyrights
- Ontology charts and browsers
- Semantic data tagging, Intelligent agents, and Search engines
- Standardized universal ontology of geographic space
- Universal ontology of geographic space in urban 3D applications

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Tomaž Podobnikar is a research advisor at Scientific Research Centre of the Slovenian Academy of Sciences and Arts and an assistant professor at Faculty of Civil and Geodetic Engineering at University of Ljubljana. He also worked at Delft University Technology (The Netherlands), University of Franche-Comté (France) and Vienna University of Technology (Austria). He holds a BSc in GIS and its applications in natural environment and archaeology, MSc in Monte Carlo methods and GIS, PhD in digital terrain modeling on the base of semantic integration of different type and quality data sources. He is the author of several publications on GIS, DTM and its applications, modeling of spatial quality fields, environmental archaeology and biology, paleo- and planetary environments, as well as historical cartography and analytical shading. He has been working on numerous projects, for example production of a national DTM that is currently widely available, on the base of his method.

Section 1: Towards a Universal Ontology in the Spatial Domain

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Sbouï Tarek (Laval University, Canada)

Bédard Yvan (Laval University, Canada)

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Gadal Sébastien (Université de Versailles Saint-Quentin-en-Yvelines, France)

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