

CALL FOR CHAPTER PROPOSALS

Proposal Submission Deadline: June 15, 2010

Universal Ontology of Geographic Space: Semantic Enrichment for Spatial Data

A book edited by Tomaž Podobnikar and Marjan Čeh
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Introduction

The universal ontology of geographic space as a semantic reference system is a severe scientific challenge that opens several questions. This book is intended to answer some these, like "is it reasonable to design universal ontology of geographic space and expect to be applied?" Or "how to implement such ontology to professional and general society through distributed information systems?" However, we assume that any spatial data that are semantically weak could be enriched to gain more efficient interoperability. The universal ontology of geographic space as enrichment engine of spatial data semantics is conceived as basically interdisciplinary. There exist various topics in the literature on the semantics of spatial symbology and different problems on developing spatial ontologies of geographic space, but correlation in databases between realities of space, concepts in human mind, and meaning of symbols/words is virtually hidden. For example, data management and analyses are often limited to the concepts of hardware, software and standards. The book is going to integrate a complexity of spatial dimension in geographic space with the philosophical interest to ontology, and furthermore the universal ontology of geographic space.

Objective of the Book

This book will escalate the current scope of research in support of development of semantically interoperable systems of geographic space and to increase automated understandability of data, interoperability of systems, application of interdisciplinary knowledge, and enlargement of the user's friendly environments. It can uncover the curtain of computing-driven dominance over the topics of semantics in "geo-" domain, which is widespread over the pillars of philosophy, logic and linguistics as the intrinsic disciplines of understanding spatial issues. We challenge potential authors to reveal the development stage of the universal solution to geospatial semantics domain which would serve as a direct means for semantic enrichment for spatial data.

Target Audience

The potential audience of this book will be from the "spatially" non-specific disciplines and fields: philosophy, theoretical linguistics, cognitive disciplines, informatics, robotics, etc. Nevertheless, the most typical audience is from the fields of spatial sciences, namely geoinformatics. In addition, the proposed book will aid to the prospective audience, e.g. to university lecturers and professors, students, researchers, developers of the spatial applications (geomatics): GIS or navigation systems, and to governmental purposes, planning agencies, environmental management, standardization, and harmonization purposes, etc. Additionally the developers of the spatial semantic applications will gain important guidance.

Recommended topics include, but are not limited to the following:

Universal ontology of geographic space and...

- ... Philosophy/Abstraction
- ... Psychology of human sensing
- ... Languages
- ... Categorization of knowledge
- ... Time

Implementation of spatial concepts to electronic means and...

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

Semantic enrichment of abstract symbols of geographic space and...

- ... Semantic reference system
- ... Measures of semantic congruity
- ... Semantic integration
- ... Conceptual generalization
- ... Semantic interoperability of spatial data
- ... Enhanced understanding of data from enriched ontology

Submission Procedure

Researchers and practitioners are invited to submit on or before June 15, 2010, a 2-3 page chapter proposal clearly explaining the mission and concerns of his or her proposed chapter. Authors of accepted proposals will be notified by July 15, 2010 about the status of their proposals and sent chapter guidelines. Full chapters are expected to be submitted by October 15, 2010. All submitted chapters will be reviewed on a double-blind review basis. Contributors may also be requested to serve as reviewers for this project.

Publisher

This book is scheduled to be published by IGI Global (formerly Idea Group Inc.), publisher of the "Information Science Reference" (formerly Idea Group Reference), "Medical Information Science Reference," "Business Science Reference," and "Engineering Science Reference" imprints. For additional information regarding the publisher, please visit www.igi-global.com. This book is anticipated to be released in 2011.

Important Dates

June 15, 2010:	Proposal Submission Deadline
July 15, 2010:	Notification of Acceptance
October 15, 2010:	Full Chapter Submission
December 31, 2010:	Review Results Returned
January 31, 2011:	Final Chapter Submission
April 15, 2011:	Final Deadline

*Inquiries and submissions can be forwarded **electronically** (Word document) or by **mail** to:*

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