

3D Cadastre in an International Context (2006) J. Stoter and P. van Oosterom

3D Cadastre in an International Context
Legal, Organizational and Technological Aspects

The increase in private property value, growth of underground and multilevel development, and the emergence of 3D technologies in planning and GIS drives the need to record 3D situations in cadastral registration. **3D Cadastre in an International Context: Legal, Organizational, and Technological Aspects** demonstrates how to record 3D scenarios in order to improve insight into overlapping constructions.

This book emphasizes the technical aspects of cadastral registration, focusing on four main topics: context (in which 3D situations in seven countries are studied); the framework for modeling 2D and 3D situations; models for a 3D cadastre; and realization of a 3D cadastre. The book presents preliminary solutions for issues related to efficient methods for 3D data collection, 3D data structuring and modeling, organization of 2D and 3D objects in one environment, 3D database creation, and 3D analyzing.

Features:

- Identifies problems of current cadastral registration in order to structure an international discussion on 3D cadastre
- Details how to model 3D geo-objects in a database management system (DBMS)
- Explores how to access and analyze 3D geo-objects in a ge0-DBMS
- Reviews the state-of-the-art in 3D GIS
- Designs conceptual models for a 3D cadastre based upon current registration and available techniques in order to improve the 3D cadastral registration process
- Examines the translation of 3D cadastral conceptual models into logical models
- Evaluates conceptual models by translating conceptual alternatives into prototype implementations using techniques developed within the research presented in the book

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