

Wojciech Pachelski: **Reference Data: Using the ISO Standards Series 19100 for Describing Geometry and Position** • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

The paper presents a conception of integration of the reference data, as defined by the national technical regulations and guidelines, with the ISO standards in the fields of vector geometry and position of spatial features. The methodology, terminology and formalism of the mentioned standards, as well as of the UML, are extensively used.

Keywords: integration of the reference data, ISO standards, INSPIRE directive, UML

Dariusz Gotlib: **Selected Aspects of Modeling of Multi-resolution and Multirepresentation Topographical Databases** • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

The article describes basic features of multiresolution and multirepresentation spatial databases. The author paid attention to the ways of presentation of geometry of objects in databases of this kind, to the methods of connection of various geometrical representations of the same objects, as well as to the importance of creation of the right hierarchy of notions of objects and metadata. In the second part of the article the author indicated a possibility of introduction of this kind of solution in the process of creation of topographical databases by the Polish civil geodesy and cartography service.

Keywords: multiresolution/multirepresentation database, topographic database, hierarchy of objects, metadata

Robert Olszewski: **Distribution of Topographic Data in Geoinformation Services** • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

The author presented a concept of geoinformation service, which distributes reference (VMap L2) and thematic data (SOZO, HYDRO and DTED2), stored in the state resources of geodetic and cartographic data.

Keywords: geoinformation service, visualisation of topographical objects, VMap L2

Joanna Bac-Bronowicz, Piotr Grzempowski, Ryszard Nowak:
Contribute Data from Cadastral Database to Multiresolution Topographic Database • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

The aim of the paper is assessment cooperation cadastral database (EGiB) and Land Parcel Identification System (LPIS) in Multiresolution Topographic Database (WTBD). It has been taken into account making attributes and geometry of buildings from cadastral database available to TOPO component of the Multiresolution Topographic Database and creating the most simplified visualisation of the buildings in the KARTO component. Usefulness alternative sources of information about buildings such as orthophoto and LPIS to contribute to Multiresolution Topographical Database have been evaluated.

Keywords: cadastral database (EGiB), Land Parcel Identification System (LPIS), Multiresolution Topographic Database (WBTD), generalization of the building development

Agnieszka Buczek: **Monograph on Multi-Resolution/Representation-Database (MRDB), or a Few Comments on the Concept** • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

Among the various elements of the Multi-Resolution/Representation-Database (MRDB) that relate to the synchronization of database sources, the objects' correlation techniques, the data exchange and usage, as well as to the legal aspects, one ought to allow for the creation of invariable object features which would make for the cohesion of the database objects. Such an approach is essential in the processes of object generalization and bonding of the original and derivative geometry. Additionally, it allows partial data exchange and object updates. An object in the MRDB database has an original (not yet distorted) geometry which is most accurate and a detailed description. Moreover, the same object can have multiple versions (derivative geometries) created upon its' generalizations and/or editing. The MRDB-type database concept should, therefore, be based on the premise of several given object generalization levels of different special areas as well as on the existence of original and derivative objects in the same area. By definition, MRDB is a heterogeneous database which is why a thorough data information and proper database management is essential in order to avoid possible confusion.

Keywords: Multiresolution/Multirepresentation Topographic Database, generalization

Krystian Koziol: Digital Terrain Model for Multiresolution/Multirepresentation Database of Spatial Data • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

In the article was discussed a current system of creating, storing and acquiring Digital Terrain Model (DTM) for topographical databases. Author paid attention to the problem of homogeneities given in DTM. The lack of the homogeneity of data is forcing into applying the tools of generalization in DTM functioning in Multiresolution/Multirepresentation Database. The author is pointing out to the possibility of applying the modified Chrobaka method for conducting simplification of the numerical model of the area after taking into consideration allocation of homogeneous objects of the model.

Keywords: Multiresolution/Multirepresentation Database, topographic database, Digital Terrain Model, generalization

Tadeusz Chrobak: The Usefulness Cartography Warp and Objective Method of Simplifying Objects to Update Data in the BDT • Geomatics and Environmental Engineering 2009, Vol. 3, No. 1/1

This article discusses the usefulness to the raising of the warp cartography generalized data point, linear and surface objects using an objective of simplification. Subject of research is the:

- unambiguous when the object of any interval scale;
- the adoption of already generalized data does not affect the final outcome of the process;
- restated-the accuracy of the data retains GUGiK industry standards;
- silvery-elimination upgrade data.

Is a result of the use of warp cartography. Process simplification objects method objective using warp cartography runs automatically what is advantage economic methods update data BDT. The advantages of the method in addition to their practical examples prove verified.

Keywords: Multiresolution/Multirepresentation Topographic Database, digital cartography generalization, update of the database topographical