3D Geospatial Database Implementation and Quality Management in Korea

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SUMMARY

As the importance of implementing 3D geospatial data has being emphasized to build a 21st century knowledge society and ubiquitous land, the demand for 3D geospatial data has been increased. In recent many researches and developments on the construction and applications of 3D geospatial data have been in progress at the public and private sector over the world. The 3D geospatial data can be used in decision making process to support a spatial planning such as urban planning, facilities management, landscape management and emergency management through the 3-dimentional interpretation and presentation of a real world. The purpose of this study was to derive the improved 3D geospatial database quality management through the analyses of the existing 3D geospatial database quality management and case studies to create high quality 3D geospatial database. The 3D geospatial database, which has been implemented recently in Korea, is the standard dataset that consists of 3-dimentional topography, transportation, building and water data with 3-dimentional coordinates, attribute, visual and additional information. It was constructed by standard data implementation process such as a work plan establishment, data collection and update, a 3D geospatial data construction, a visual data creation, data quality management and data distribution, and was also controlled by the guideline of data quality management at each data implementation process quantitatively and qualitatively. From this study we defined the concept and boundary of 3D geospatial database quality management, set the process and contents of 3D geospatial database quality management in detail, and made the guideline such as the quality management checklist. The 3D geospatial database quality management through establishing an integrated quality management can make data supplier update data efficiently and users get high quality data.

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