

Organization of a geodatabase in a water conservancy GIS

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Abstract Nowadays, the applications of GIS in water conservancy become wider and wider. The organization and management of geodata is very important to the establishment of a water conservancy GIS. This paper adopts a relational database to organize all the geodata, including vector data, remote sensing data, grid data, DEM data, metadata and so on. Using vector data adopts the method of uniting the minimization of the storage object with a logical layer and logical tile. Remote sensing data, grid data and DEM data are partially managed by using a pyramid catalogue tree. TIN and original CAD data are managed using binary data blocks. Searching efficiency is improved by using the corresponding metadata. A spatial database based on this kind of design was applied extensively in the Yangtse River channel monitoring management system in Jiangsu province.

Key words water conservancy; spatial data; database; ArcSDE
