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Design of monitoring data visualization system of water resources based on J2EE architecture

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ABSTRACT

In order to solve the problems of slow update speed and low definition of visualization results existing in traditional data visualization system, this research realizes the optimization design of visualization system from three aspects of hardware, database and software respectively under J2EE architecture. The wireless communication network and terminal acquisition device of the system are optimized respectively. On this basis, the database is built according to the type of water resources monitoring data, and the relevant data is imported into the database environment to provide data support for the operation of the software. Then, the 3D scene is constructed, and the location information of water resources monitoring points is imported into the created environment, and the real-time monitoring data is collected by hardware devices. By drawing visual images and generating image controls, the visualization of water resources monitoring data can be realized. The experiment shows that: compared with the traditional visualization system, the visualization update time of this system is reduced by about 0.69s, and the definition of the visualization results is effectively improved.

Keywords: Water resources monitoring; J2EE architecture; Monitoring data; Data visualization processing

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