

Research on the construction concept and general framework of Smart Water Resource

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ABSTRACT

Frequent hydro-meteorological events caused by global climate change and human exacerbate activities, make the water resource problem more complicated. The increasing speed urbanization brings a significant impact on the city flood control and security, water supply safety, water ecological security, water environment safety and the water engineering security in China, and puts forward higher requirements to urban water integrated management, undoubtedly which become the biggest obstacle for water ecological civilization construction, thus urgent requiring an advanced methods to enhance the effectiveness of the water integrated management. The other fields of smart ideas point out a development path for water resource development.

The construction demand of smart water resource is expounded in the paper, combining the philosophy of modern Internet of things with the application of cloud computing technology. The concept of smart water resource is analyzed, the connotation characteristics of smart water resource is extracted, and the general model of smart water resource is refined. Then, the frame structure of smart water resource is put forward. The connotation and the overall framework of the smart water resource represent a higher level of water resource informationization development and provide a comprehensive scientific and technological support to transform water resource management from an extensive, passive, static, branch and traditional management to a fine, active, dynamic, collaborative and modern management.

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