

**Development of the digital simulation system of drought evolution
simulation and assessment in a basin**

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Abstract: Taking the Manasi Lake River Basin as an example, a digital simulation system Platform of Drought Evolution Simulation and Assessment in a basin was developed. The key techniques used in the system development included multi-source data management, drought evolution simulation and assessment and information intuitive expression. The system not only provided the basic functions, e.g., multi-mode roaming control, spatial-temporal data query and display, water infrastructure information query and display, dynamic text annotation, and multimedia simulation, but also covered professional functions, e.g., drought index calculation, graphics expression of drought evolution parameters, spatial data interpolation, and dynamic visualization of drought evolution process.

Key words: digital basin; virtual reality; drought evolution; simulation and assessment