

## **DESIGN AND IMPLEMENT OF 3D ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEM**

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### **ABSTRACT**

Two-dimensional electronic chart system can't intuitively express the various information of 3D navigation environment, and the existing 3D electronic chart system lacks comprehensive display and scientific quantitative analysis. In that context, designed a 3D electronic chart system framework based on GIS and virtual reality technology (VR technology) and studied the key technologies such as visualization of 3D navigation environment, numerical simulation of water current and dynamic ship information display. Consequently, a 3D electronic chart system has been developed for Sutong Bridge section of Yangtze River waterway and it is verified to be feasible and reliable for ensuring safety of navigation.

**KEYWORDS:** GIS, Three-Dimensional Electronic Chart, Three-Dimensional Simulation, Virtual Reality