National Flood and Coastal Defence Database Enhancement Live

The UK Environment Agency (EA) has been working with 1Spatial and its system integration partner Scisys to evaluate data re-engineering for the National Flood and Coastal Defence Database (NFCDD) system during 2006. The changes approved through this evaluation have now been implemented and are live. In January the latest release of the NFCDD application provided by Scisys to the EA contained new functionality to perform simplification, geometric and topological validation against EA data. These processes make use of Radius Topology software from 1Spatial.

Initially, the EA worked with 1Spatial to evaluate the re-engineering options. This involved 1Spatial's expertise in defining Oracle-based data models and the 1Spatial technology to process data. The results of the evaluation showed that as a result of the data generalisation based on topology, there were significant increases in processing time. Rendering an image yielded a 115% increase in the speed, whilst spatial queries using address points showed a 229% increase. There was an accompanying increase in the accuracy of the query results returned.

After the evaluation, a process was defined whereby the functionality and software were used outside the NFCDD system. The data were extracted, validated then reloaded back into the database so that users could benefit from the results. This process has now been built into a workflow that automatically cleans and simplifies geometries as data updates are received.

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