

ANALYSIS OF GIS'S CONVENTIONAL DATA MODEL AND
APPLICATION OF OBJECT-ORIENTED TECHNIQUE

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With the developing of GIS application field, New requirements have been made by GIS's basic function for the data model and data structure. In this paper, several problems are analysed for GIS conventional data model from its application point of view: 1. difficult to portray the complex real world. 2. difficult to achieve consulting quickly and the complex spatial analysis. 3. difficult to construct the 3D spatial model and time-spatial model of the real world. 4. difficult to extend the system.

The characteristics are also addressed about the object-oriented modelling and programming. Two methods are proposed for the construction of the object-oriented GIS (OOGIS). Finally, the remarkable merits in OOGIS function and application are pointed out based on the comparing the conventional data model with the object-oriented data model.