

# **A Model for Integrating Multi-scale Spatial Data for e-Government and Public Service**

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**Key words:** Geo-spatial framework, e-government, data integration, data model

## **SUMMARY**

In recent years, significant developments have been made in Spatial Data Infrastructure (SDI) in China. Datasets of various types have been produced at national, provincial and even city levels. GIS technology has been used more and more in E-government and public services. Such application might involve different level of study in China, for example, an officer in local government might want to know where is the road cross that are having serious traffic jam, while an official in central government wants to know the location of a county that are suffering flooding. So the geo-framework should be multi-scale, multi-abstracted and multi-represented, which means one geographic feature in the real world will be modeled several times in SDI.

To build the spatial database for the discussed application, one of the key issues is to find the most suitable geo-spatial models according to the different level of study. The other is to integrate the data, which means to build and maintain the linkages among those differently represented objects.

In this paper, a data model was proposed which can integrate geographic features in different scale based on the linkages in geometry level and feature level. With this method, a sample database was implemented, including 1:1 million scale (cover the area of China), 1:250,000 scale (cover the area of Beijing city), 1:10,000 scale (cover the downtown area of Beijing) and 1:500 scale (cover one district within downtown area of Beijing). A Web-based platform that can used in E-government has been developed based on this database.