Technology of Thematic Mapping in the atlas of “China Land Resources Investigation Dataset”

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“China Land Resources Investigation Dataset”, one of the national land investigation productions, shows the present status of land use and property situation in China. It is the composition of tables, thematic maps, text explanation and pictures. The statistical cell spreads out from the whole world, the 30 representative countries, and the provinces of China, to the counties of China. About 40% of the dataset is more than 50 pieces and 309*460mm format thematic maps. It had to be finished and published in 3 months. Consequently the modern technical of cartography had been adopted.

Fully digital cartography system has characteristics in mapping with high speed, high accuracy, quick update and WYSWYG. It has solved the problem of long production periods and slow update in traditional mapping.

Firstly, present situation of the modern cartography and publishing system based GIS are analyzed simply. Two representative systems such as the MGE system of the American Intergraph Company and the Mirage V4.5 system of the Founder Group are analyzed and compared.

Secondly taking the cartography technology used in the atlas as an example, the supported hardware and software structure of the modern cartography system based on the integration of GIS and desktop publish system are brought forward, especially the various software system function such as GIS, DTP and Office system are focused.

Thirdly the technical flow of digital mapping is presented. The main tasks and goals of stages from start to end are discussed.

Lastly some system analysis and technical issues including the data interfaces, data analysis and data processing are discussed because the different data resources are coming from different systems. Also the future development of modern cartography system is prospected.