

Test on Automatic generalisation of Topographic Map  
from 1:10000 to 1:50000

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Abstract

In this paper, it is proposed that is a mixed conceptual outline about topographic map generalisation based on rules and models. Under this outline the questions on topographic map generalisation are divided into three parts: needing inference of rules, only using mathematical models, and better using the editor in the system. The factors which are need in topographic map generalisation are grouped into three different categories: first class is the aim of topographic map generalisation, second class is features of landscape on topographic map, final class is the relationships among features on topographic map. The aim of topographic map generalisation mainly is that, which scale source topographic map, which scale generalised map. Because the contents on topographic map are defined by specification. The features of landscape on topographic map include which area this map is located in, and small landscapes in this map, which are important factors in proceeding of topographic map generalisation. The relationships among features in topographic map are grouped into six categories: points with points, points with lines, points with areas, lines with lines, lines with areas, areas with areas. They can be further classed into many forms. In design of this system, each relationship must be clear, in order to build automatically build it in this system. Editor is need in building some of known relationships. Generalisation of topographic map is a complex problem. In this paper, beside the discussion of conceptual outline, it is given out that a sheet of topographic map which scale is 1:10000 is generalised into a piece of map which scale is 1:50000. Many models are actualized, which are tested by this example.