

AUTOMATED DIGITAL MAP DESCRIPTION FOR GENERALIZATION

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ABSTRACT

The present article describes an approach to map generalization based on automatic map description. This approach is focused on the identification of the errors (inconsistencies) originated by the generalization. Map description is attempt to represent the relationships (invariants) that not change after the generalization by a set of description operators. The inconsistencies are identified by comparing the description of the map prior to and after generalization. The identified inconsistencies are corrected using local generalization parameters. This process can be iteratively repeated until all inconsistencies are corrected. The resulting map without inconsistencies indicates that the map's semantics is preserved after the generalization. Examples and results of the proposed approach are presented for the case of study of hydrological networks.

KEY WORDS

Automatic Generalization, Digital Map Description, Spatial Properties, Spatial Semantics.