

CARTOGRAPHIC IMPLICATIONS OF AUTOMATED MULTILAYER MODIFICATION

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ABSTRACT

During cartographic compilation and editing, there may occur an effect of one feature upon several others which intersect and/or coalesce with that feature. These features in traditional production usually exist on separate layers or flaps of the compilation manuscript. The correction or modification of features as they may be affected by some other feature's change, then becomes a multilayered modification task.

As more and more cartographic tasks have become automated to some extent, more of the overall production process is also becoming automated. This includes the multilayered modification task. Synectics Corporation is currently involved in a project for the Rome Air Development Center which is pushing the application and integration of automated cartographic compilation and revision techniques to new limits. This project includes the study, analysis, and implementation of a baseline automated multilayer modification capability.

This paper presents a discussion centering upon the expression of multilayer modification processes as they are performed manually with an evaluation of these manual functions as they pertain to automation. This includes the impact of spatial dimension, scale, and relations of affected features; the expression of vague and subjective actions as specific constructs or rules; and the degree of automation possible, which is unique to each modification environment.