

AUTOMATED MAPPING

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Summary

Automated mapping on many occasions makes use of editing stations replacing thereby the labour of the draftsman of the traditional mapping process by the work of the operator of the interactive graphical station. Considering the cost of that equipment and the time consumed to operate it, it becomes apparent that a mapping process which disposes of the editing station can be rather advantageous, particularly for smaller mapping organisations. A brief exposition of such a mapping process is given below.

Regardless of the method by which the mapping is performed, with or without an editing station, the first stage of the mapping is the data collection. Two types of data are collected, topographic and planimetric, the latter comprising all features which are to be presented on the map. During the data collection codes are assigned to the various features. These serve several purposes; indicating which features do not participate in the contour generation, describing the nature of the features and how they have to be plotted (colour, type of line etc.) and determining the mode of processing, the data representing the features are subjected to.

On completion of the collection the data are processed by a series of programs. These execute two major steps, the one - generation of a DTM consisting of a grid of elevations and an array of topographic features, the other - generation of a planimetric data base. The second step includes, among

others, the functions usually performed on an editing station, such as "rectification" of buildings, smoothing curved lines, maintaining parallelism between lines, assigning symbols and so on.

At the processing stage, the data collected in overlapping areas between photogrammetric models are adjusted in order to ensure a unique definition of lines passing from model to model.

The data bases so obtained constitute a digital map extending over the entire area under consideration.

Samples of maps produced by the above procedure complete the paper.