

AN INVESTIGATION INTO THE METHODS FOR ANALYTICAL
CONSTRUCTION OF SINGLE STEREO-MODELS.

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ABSTRACT

Analytical formulations have been undertaken to construct a single stereomodel using three different approaches, each of which has, as input data, image coordinates and a few ground control coordinates. The image coordinates have been obtained from a mathematical simulation technique.

Computer programs have been written and tested for the image coordinates simulation and for the three approaches ^{of} model formation and thereafter used in the tests.

Investigations and tests have been carried out to determine the advantages and disadvantages of each approach regarding the various combinations of ground control, image coordinates and their variances. The model formation through relative and absolute orientations has been proved to have more advantages over the other two approaches in terms of precision. The second and third approaches, which basically use exterior orientation, have been found to have similar accuracies.