

Paper Title: Digital Terrain Modeling by Image Matching

Topic: Data Processing and Analytics – Image Matching

Preference: Poster presentation

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Abstract:

The paper reports on the problem, how to optimize the the image matching process after the aerial triangulation. The image matching algorithm is used to measure the tie points on the adjacent photos. Recent autocorrelation implementations cannot offer or suggest the optimal parameters. Therefore we need to investigate it before launching the automatic image matching process for the whole photogrammetric block. In this research the results of 3D modeling including the accuracy requirements for the ground coordinates and exterior orientation elements are demonstrated. For testing large scale (1:8000) scanned aerial photos were used in three different pixels sizes between 7-52 microns. By this way we can compare also the effectiveness and accuracy of software coming from different companies. This comparison can be useful also for the solution providers acting on the photogrammetric market.