

DIRECT SENSOR ORIENTATION FOR LARGE SCALE MAPPING – POTENTIAL, PROBLEMS, SOLUTIONS

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Abstract

Georeferencing is one of the major important tasks in photogrammetry. Traditionally it is achieved indirectly using the well-known method of aerial triangulation. With the availability of integrated GPS/IMU, (Inertial Measurement Unit) this situation changed. The direct determination of the exterior orientation is possible now. Today, the direct and integrated sensor orientation is used for a wide range of sensors such as LIDAR, SAR sensors, digital line scanner systems and aerial cameras. This paper, investigates the performance of direct and integrated sensor orientation for large scale mapping using the data set of the test 'Integrated Sensor Orientation' of the European Organization for Experimental Photogrammetric Research (OEEPE). The concept, potential, problems and solutions of direct and integrated sensor orientation are discussed.