

# **A study on the sensitivity of photogrammetric camera calibration and stitching**

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## **Abstract**

This paper presents a detailed simulation study of an automated robotic photogrammetric camera calibration system. The system performance was tested for sensitivity with regard to noise in the robot movement, camera mounting and image processing of the light sources. Real world applicability of the calibrations are assessed by quantifying the accuracy with which they generate a photogrammetric stitched panorama. It was found that system performance is robust in the presence of noise, with the focal length accuracy being a prime determinant in over all calibration accuracy and stitching performance.