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Accuracy of typical photogrammetric networks in cultural heritage 3D modeling projects

E. Nocerino[1,2], F. Menna[1], and F. Remondino[1]

[1]3D Optical Metrology (3DOM) unit, Bruno Kessler Foundation (FBK), Trento, Italy
[2]Dept. of Sciences and Technologies, Parthenope University of Naples, Italy

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Abstract. The easy generation of 3D geometries (point clouds or polygonal models) with fully automated image-based methods poses nontrivial problems on how to check a posteriori the quality of the achieved results. Clear statements and procedures on how to plan the camera network, execute the survey and use automatic tools to achieve the prefixed requirements are still an open issue. Although such issues had been discussed and solved some years ago, the importance of camera network geometry is today often underestimated or neglected in the cultural heritage field. In this paper different camera network geometries, with normal and convergent images, are analyzed and the accuracy of the produced results are compared to ground truth measurements.

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