Point Clouds and Orthomosaics from Photographs. Their Use in a Civil Engineering Laboratory.

Maria Henriques and Nadia Braz (Portugal)

Key words: Deformation measurement; Low cost technology; Photogrammetry; Photogrammetry; Point cloud; Orthomosaic; 3D model

SUMMARY

Generating point clouds or orthomosaics from photographs can be a very affordable and easy way of access to valuable information of an object or a surface. Close range photographs, good acquisition geometry, allows that one can achieve high quality point clouds and othomosaics, sometimes reaching sub-millimetre accuracy. The paper presents some of the uses of point clouds and orthomosaics at the National Laboratory for Civil Engineering of Portugal, created using photographs taken by good quality digital cameras and Micmac, a free and open source software.

Point Clouds and Orthomosaics from Photographs. Their Use in a Civil Engineering Laboratory. (7605) Maria Henriques and Nadia Braz (Portugal) 1