Volume XXXVIII-5/W16

Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XXXVIII-5/W16, 77-81, 2011
www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XXXVIII-5-W16/77/2011/
doi:10.5194/isprsarchives-XXXVIII-5-W16-77-2011
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HIGH AND LOW RESOLUTION TEXTURED MODELS OF COMPLEX ARCHITECTURAL SURFACES

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Keywords: 3D model, visualization, texture, UV mapping, constrained mesh, rendering

Abstract. During the recent years it has become obvious that 3D technology, applied mainly with the use of terrestrial laser scanners (TLS) is the most suitable technique for the complete geometric documentation of complex objects, whether they are monuments or architectural constructions in general. However, it is rather a challenging task to convert an acquired point cloud into a realistic 3D polygonal model that can simultaneously satisfy high resolution modeling and visualization demands. The aim of the visualization of a simple or complex object is to create a 3D model that best describes the reality within the computer environment. This paper is dedicated especially in the visualization of a complex object's 3D model, through high, as well as low resolution textured models. The object of interest for this study was the Almoina (Romanesque) Door of the Cathedral of Valencia in Spain.

Conference Paper (PDF, 1631 KB)

Citation: Stathopoulou, E. K., Valanis, A., Lerma, J. L., and Georgopoulos, A.: HIGH AND LOW RESOLUTION TEXTURED MODELS OF COMPLEX ARCHITECTURAL SURFACES, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XXXVIII-5/W16, 77-81, doi:10.5194/isprsarchives-XXXVIII-5-W16-77-2011, 2011.

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