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3D VIRTUAL ANASTYLOSIS AND RECONSTRUCTION OF SOME BUILDINGS IN THE SITE OF SAINT-SIMEON, SYRIA

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Abstract. The site of Qal'at Sem'an, located in the north of Syria, was built in the honor of Saint Simeon around the column on the top of which he lived many years and died in 459. Since 2003, this site has been the object of digital surveys which covered the major part of the area. The sanctuary (Qal'at Sem'an) and the village (Deir Sem'an) are composed of different types of edifices; this variety gives us a large field of studies. Several surveying methods were applied on these sectors according to the morphology of the analyzed parts and to the analysis needs.

This article presents a case study based on a combination of different digital measurement and modeling techniques for the virtual reconstruction of various parts of this complex site. As this work is conducted over several years, different acquisition tools have been experimented for image-based and range-based 3D modeling.

In particular, we focus on the "Residence", a civil building of the 6th century which probably was an oil mill. We will describe the anastylosis process founded firstly on the digital surveying, secondly on the 3D model structuring and finally on the information interfacing by using NUBES, an integrated platform for describing, analyzing, documenting and sharing digital representations of heritage buildings. The final goal of our work is to evaluate the relevance of the survey / modeling / semantic structuring workflow for an effective analysis of a complex site.

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