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3D RECORDING FOR 2D DELIVERING – THE EMPLOYMENT OF 3D MODELS FOR STUDIES AND ANALYSES –

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Abstract. In the last years, thanks to the advances of surveying sensors and techniques, many heritage sites could be accurately replicated in digital form with very detailed and impressive results. The actual limits are mainly related to hardware capabilities, computation time and low performance of personal computer. Often, the produced models are not visible on a normal computer and the only solution to easily visualized them is offline using rendered videos. This kind of 3D representations is useful for digital conservation, divulgation purposes or virtual tourism where people can visit places otherwise closed for preservation or security reasons. But many more potentialities and possible applications are available using a 3D model. The problem is the ability to handle 3D data as without adequate knowledge this information is reduced to standard 2D data.

This article presents some surveying and 3D modeling experiences within the APSAT project ("Ambiente e Paesaggi dei Siti d ' Altura Trentini", i.e. Environment and Landscapes of Upland Sites in Trentino). APSAT is a multidisciplinary project funded by the Autonomous Province of Trento (Italy) with the aim documenting, surveying, studying, analysing and preserving mountainous and hill-top heritage sites located in the region. The project focuses on theoretical, methodological and technological aspects of the archaeological investigation of mountain landscape, considered as the product of sequences of settlements, parcelling-outs, communication networks, resources, and symbolic places. The mountain environment preserves better than others the traces of hunting and gathering, breeding, agricultural, metallurgical, symbolic activities characterised by different lengths and environmental impacts, from Prehistory to the Modern Period. Therefore the correct surveying and documentation of this heritage sites and material is very important. Within the project, the 3DOM unit of FBK is delivering all the surveying and 3D material to the interdisciplinary partners of the project to allow successive analyses or derivations of restoration plans and conservation policies.

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