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AUTOMATIC ORIENTATION OF IMAGE SEQUENCES IN CULTURAL HERITAGE

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Abstract. role in the field of cultural heritage. Making copies of virtual objects is very significant for their consultation, storage, disclosure and restoration. Nowadays the modeling of a free-form object can be attained both by laser-scanning and by digital photogrammetry. With the use of the last methodology dense point clouds can be obtained through elaborate process steps. The purpose of this study is to provide input to the automation of some phases of these processes. Recent advances in the Structure from Motion community have greatly extended the feature matching and triangulation capabilities to enable significantly larger datasets to be used for the reconstruction of the relative orientation of the cameras and, consequently, of the artefacts.

In this paper a methodology to automatically orient a set of images is presented, such methodology makes use of algorithms for feature extraction coming from computer vision community and allows to easily recognize a large amount of homologous points on a set of images in a completely automatic way.

The above said methodology has been adopted for the automatic orienting of some sequences of images relative to several interesting sites from the perspective of cultural heritage.

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