



STSM Report

Assessment of Spatial Techniques in Cultural Heritage Documentation

REFERENCE: Short Term Scientific Mission, COST TD1201

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Abstract

The short term scientific mission (STSM) at the “Royal Belgian Institute of Natural Science” (RBINS) is about the investigation and assessment of the evaluated techniques in the Agora3D project. This project lasted 18 month and tested several spatial and spectral techniques according to their achieved accuracy of captured shape and texture as well as cost and time. My master thesis is addressed to spatial techniques and their individual characteristics to characterise, classify and assess them. It is related to the Working Group WG2 of COST-Action TD1201 called “Colour and Space in Cultural Heritage” (COSCH). A look into such an assessment for Cultural Heritage (CH) objects like Agora3D did, including possibilities and limitations, and also the perspective of a CH expert, improve the interdisciplinary understanding and extend the previous ideas.

The complicated handling of professional high-end equipment (of techniques manufacturers) and the limited settings of the low-cost instruments handicap the absolute and unique comparison of the produced spatial data. Only relative values are extractable without the chance to define the ideal values and without localise the exact mistakes or limitations reasons.

For shape accuracy and suitability due to the object size are similar to the technical point of view. The results are not only the values for the used costs and time of three different sized object types, but also listed limitations of each technique due to materials and geometries of the specific objects of the museums collections. Next to those explicit values or descriptions, which can be used for recommendation reasons, the better understanding of CH experts and integrating the knowledge in the technical characterisation is helpful for the further process of the decision making process itself and its structure. Furthermore the research of needs and demands to instruments from the CH field of view as well as data and software extend the knowledge for the semantic model.

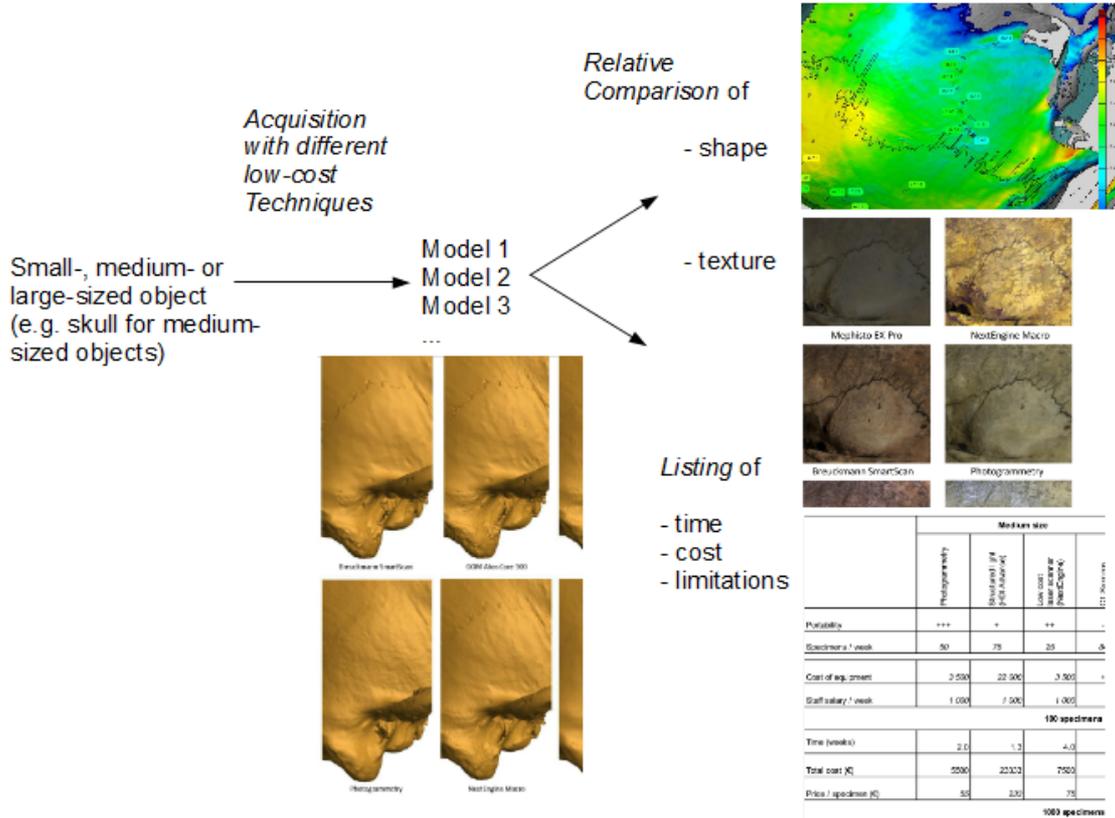


Figure: Description of the whole Acquisition- and Assessment-Process