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FROM REAL TO..."REAL". A REVIEW OF GEOMATIC AND RAPID PROTOTYPING TECHNIQUES FOR SOLID MODELLING IN CULTURAL HERITAGE FIELD

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Abstract. The documentation and 3D modelling of Cultural Heritage are now mainly based on digital techniques to produce complete, detailed and photorealistic three-dimensional surveys. The integration of various technologies and sensors is the best solution to obtain results with these characteristics. According to the reproduction scale, you need to change the characteristics of the instruments used during acquisition.

Reduced or real scale solid models are an effective support for projects involving communication and divulgation: they can be understood without the intermediation of data processing systems, therefore increasing the potential users.

Additive Manufacturing (AM) is an expression indicative of technologies used to fabricate physical objects directly from CAD data sources; they are also called three-dimensional printing, solid freeform fabrication or layered manufacturing. The paper analyzes only factors related to the processing that involves the superficial aspect of the solid model; some important aspects useful in other applications, e.g. mechanical behaviour of the used material or the method to realize the internal structure or possible supports of the model, are neglected.

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