Chapter 4
The Documentation for the Preservation of Great Decorations in “Quadratura” in Noble Palaces of Pontremoli (Italy)

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ABSTRACT
The themes of conservation and dissemination of heritage, both tangible and intangible, are actually central in the scientific debate. Modern technologies play a crucial role in the transition into the “digital age” and it is essential to make the best use of their potential. This chapter describes a pipeline, made precisely thanks to well-established previous experiences, which is applied to the case study of the noble palaces of Pontremoli and their decorations in “quadrature.” It is illustrated how starting from the data of digital survey it is possible to construct and realize a virtual world in the form of a “videogame,” which is useful as a tool for easier disclosure of cultural heritage.

INTRODUCTION
The rapid evolution of technology in recent decades has greatly moved the attention of the scientific community of the field of drawings towards aspects of Research that pay attention to new problems. Databases derived from 3D digital survey represent a very rich source for the documentation and knowledge of artifacts but currently require an in-depth analysis.

In particular, rules, survey methodologies and guidelines must be established for their correct acquisition.

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A further problem is about the preservation of original data, also for the purpose of creating functional databases, or for the potential use and dissemination of information.

Principles must be shared for the validation of information and data collected and at the same time databases must be built to protect this heritage, so that it can be consulted and used by anyone who needs it.

For this purpose, during previous years, methodological reference systems, papers and documents were developed, discussed and shared by specialists and scholars in the field of architecture, such as the “European Charter of Architectural Heritage” (1975) or, with regard to specific concepts of digitization, the “Charter on the conservation of Digital Heritage” (2003).

Tools actually available for architectural surveying and graphic representation are affordable by everyone, as far as costs and availability are concerned. The critical point for the control of the quality of scientific production and for the correct and effective dissemination of products is the “handbooks” drafting and the delineation of shared methodological procedures for obtaining satisfactory results.

Furthermore, the London Charter updated version of 2009 proposed to define objectives and principles related to the use of “…computer-based visualisation methods in relation to intellectual integrity, reliability, documentation, sustainability and access.” (London Charter, 2009, Introduction)

It sets some principles that ensure how “…digital heritage visualisation is, and is seen to be, at least as intellectually and technically rigorous as longer established cultural heritage research and communication methods. At the same time, such principles must reflect the distinctive properties of computer-based visualization technologies and methods.” (London Charter, 2009, Introduction). Guidelines that should be followed by researchers are also described, to ensure that people and community, whether academic or educational, can understand, evaluate and then apply and use proposed methods.

On the basis of different research fields, however, diversified methodologies must be adopted, as “a computer-based visualization method should normally be used only when it is the most appropriate available method for that purpose” and “it should not be assumed that computer-based visualization is the most appropriate means of addressing all cultural heritage research or communication aims.” (London Charter, 2009).

Today, various tools are available for the dissemination and use of Cultural Heritage, both material and immaterial, and these concern, especially in our field, with the virtual reconstruction of architecture or artefacts. The construction of 3D models through different software, and their migration on online platforms and mobile devices, offers the opportunity to generate highly immersive “virtual worlds” where it is possible to reach a high level of realism.

However, it is necessary to choose right and most suitable tools for graphical representation based on the needs and final aim of the work or research project.

The experience presented regard the documentation of noble palaces of Pontremoli, and it tries to define an operational framework, replicable and implementable in other similar “cases”, following the guidelines proposed by the London Charter. It is necessary to take into account the tangible and also intangible value of dealing assets, since they constitute the identity of represented places, identified in this specific case into decorative apparatus of palaces’ environments. Starting from the study of documentary material and historical bibliography, and integrating 2D and 3D data and surveys collected, the authors want to propose a methodological example that could constitute a solid basis towards a better possibility of using data to achieve an adequate valorisation, at least through the web, of this private heritage at risk of “decay” and not easily accessible to a large public.
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