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Conservation and valorization of the historical heritage through laser scanner technology

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Abstract. In Italy there is a very widespread multitude of buildings important and interesting in the field of Cultural Heritage. Several of them have been abandoned in the last decades and now they show all the deterioration and the structural damages due to abandon. This is also the case of about forty traditional farmsteads located in the close suburbs of the city of Milano and belonging to the local administration. Among these farmsteads, Cascina Linterno, for its rich historical background going back to the 14th century and earlier, was chosen to carry out a test in the planning process with the participation of local associations under the supervision of a group of experts in the field of structural assessment, preservation and design from Politecnico of Milan. Time and resources saving and effectiveness of appropriate activities is the main guideline of this process, where the first step consists necessarily on the topographical survey. The choice of Terrestrial Laser Scanner to carry out the survey complied naturally most necessities, but it was also meant to provide new challenges in the fruition of the point cloud by groups of experts without topographical knowledge. The aim is to analyze the procedures and the output needed by the different specialists involved in this kind of intervention on Cultural Heritage, in order to provide friendly tools to work directly on the point cloud, taking advantage of its rapidity in acquisition and of its richness of details, thus avoiding the production of traditional "lossy" layouts.

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