Abstract

Traditional techniques for recording and modelling historical buildings using surveying instruments and CAD are tedious and time-consuming procedures, which do not provide detailed descriptions of complex façades. Recent developments in photogrammetry and laser-scanning techniques present non-contact, flexible and accessible surveying tools for 2D–3D recording. This paper discusses the potential for combining photogrammetry, laser scanning and computer vision for the documentation of heritage sites. By these means the efficiency of data collection can be optimized, and accurate true orthophotos of the studied structure can be generated using precise 3D surface representations derived from laser scanning and overlapping digital images. The final product allows the creation of detailed and complete façade plans, which are both graphically superior and accurate. The paper includes a study of the approach applied to historic buildings in Gharissa, one of the best preserved heritage villages in Jordan.