The project consists in a rapid and versatile method for the recovery of graphical techniques such as orthophotos, plants, contours and sections of sites and archaeological remains. Through the use of web services that use a cloud computing system (like Project Archaeology 2.8 of Adobe), from a set of photographic acquisitions we can obtain a reconstruction of a three-dimensional model from which we can draw, then, all the necessary elevations and graphical analyses.

Subject of the application was a slice (cover part of time) of an archaeological complex, namely the tombs of Biaia of Hera (Sicily). To obtain the detailed tridimensional model of the area, 100 photos were acquired with a Canon EOS 1000 camera. As expected, the determining factor of the final result is the quality of photography and of how it is taken. We must have, as far as possible, a conditions of constant illumination: Where photo and out of the "standard" illumination conditions, are the cause of alterations and inaccuracies in the geometry of the final model. It is a very good thing that object must be really present in all photos, because otherwise we found difficulties in the software to converge in a unique model. Specifically, the acquisitions were performed on an ideal circle, moving with constant radius and doing a shot every 60° or 63°.

With these considerations, the photographic detection phase on-site was completed in only 60 minutes (to scale the 3D model was necessary take a significant measure, with great precision), unlike, for processing and for graphic modeling, a day of work in laboratory is needed. With the quickness and the speed of the method, these applications can also be implemented for the recording, the study and the analysis of the different phases of an archaeological research. In this way it would be possible to have a three-dimensional model and the traditional two-dimensional stratigraphies. The relative simplicity of acquisition phase and the speed of data processing are the key features that make this approach very reliable in order to obtain the documentation of archaeological sites. This is especially true in cases where we must work in dangerous conditions like particular fragility of the ruins, new needs of construction or simply when the opportunity to work directly on the site is very limited and reduced. In addition to this benefits, the method has also a good accuracy. In fact, with photographic acquisitions with a distance of 0.3 m from the object, it was possible to reduce the average error to zero cm. (On-line processing.pdf).

The suggested approach allows to obtain good results when it is applied to objects of modest size. In the presence of large architectural elements, the resulting model shows irregular mesh of triangles, with significant inaccuracies, overlapping elements and chromatic alteration. Otherwise, with capitals and statues it was possible to obtain realistic models with a small number of small errors, that can be easily corrected with a specific editing software.