Reconstructing a past built environment: from low altitude aerial images to the application of a rule-based modelling approach for the archaeological visualization of the city-scape of ancient Haliartos.

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Abstract

Current researches on ancient Greek cities more and more use innovative research methods and technologies, involving artifact surface surveys, archaeological, aerial and geophysical prospections, in order to narrate city biographies, with a special eye on their landscape and historical context.

This contribution illustrates the steps we undertook to create a virtual reconstruction of the 3rd century urban layout of ancient Haliartos (Boeotia – central Greece), as well as the various datasets we used to this end. Evidence of surface architecture resulting from airborne and low altitude aerial images were combined with GPS mapped ground observations and with the results of both on-site geophysical prospections and a ceramic surface survey.

The 3D models of residential *insulae* and architecture, created in the software package CityEngine and following a rule-based modelling approach, provide high potential for the interpretation and visualization of archaeological datasets, as well as for the monitoring and validation of the reconstruction processes.