

# Baloon Photogrammetry for Archaeological Surveys

Vassilis FOTINOPOULOS, Greece

**Key words:** Archaeological Surveys

## ABSTRACT

A very special platform has been recently constructed from Topotech Surveys, GREECE as a Recording Method for Monuments. It is a special baloon construction aiming in the full 3-D photogrammetric integration of Archaeological Surveys. This photogrammetric bundle performs mini aerial photogrammetric acquisition over Archaeological Monuments with high accuracy and image analysis. This type of mini-aerial-photogrammetry was proved to be valuable in excavations, site recording and monument conservation.

The top of a monument or an excavation is usually inaccessible by land surveyors. Special equipment is therefore necessary for the recording of the top of the monument. Moreover the type and level of detail needed for the production of a diagram needed for the conservation of the top of the monument makes photogrammetry an ideal application to record it as a digram or orthophoto.

The special set constructed for the acquisition of images on top of monuments or excavations consists of a Ball or Zepellin type baloon, a 3- axis servo-base and a 25-ressau metric Hasselblad camera. The 3-axis base is placed between the baloon and the metric camera and controls the Omega,Phi,Kappa placement of the camera. Camera operation and rotation is fully controllable from the ground due to a video link that transmits the acquired image to the ground. Therefore stereoscopic and monoscopic image acquisition is highly accurate, avoiding random image acquisition. The baloon is now used from Topotech Surveys, GREECE as a platform for the acquisition of metric aerial images used for photogrammetric stereoplotting, orthophoto, 3d Modelling & Virtual Reality creation,. Three case studies are discussed were all photogrammetric products were produced.

## CONTACTS

Vassilis Fotinopoulos  
Tel. + 30 6944 666 794  
Fax + 30 2106 032 414  
Email: vf@topotech.gr  
Web site: www.topotech.gr