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Geodesy for archaeological studies - photogrammetric documentation of architectural details

Justyna Ruchała, Katarzyna Sawicka, and Edyta Puniach

AGH University of Science and Technology in Krakow, Faculty of Mining Surveying and Environmental Engineering, Poland (justyna.ruchala94@gmail.com)

The aim of this paper is to discussthe full methodology of photogrammetric documentation of architectural details on site. All work stages (the preparation of the test stand, taking images with principles of close range photogrammetry, the development and visualization of obtained result) are presented.
The technology of close range photogrammetry is successfully applied, among others, in the preparation of architectural documentation of archaeological small-size objects as well as their three-dimensional (3D) visualization. It provides comprehensive information on the object's shape in a relatively short time. The collection of the detailed information on the geometry of the object allows for its trouble-free reconstruction in the future. However, in tough field conditions, the surveyor has to minimize the influence of external factors on the quality of research material.
The necessary images and other measurement data were collected during archaeological field research. The images, used to create the 3D models of architectural details, were taken with the non-metric cameras. The high availability of this type of cameras allows to reduce the costs of documentations, but also affects the accuracy of the development. The data processing is extensive and requiresappropriateknowledge and experience from the developer.
The issue of this paper concerns archaeological, surveying and architectural research environments. In the age of the optimization of the data processing, the cooperation between representatives of various scientific field should be strengthened.