

Abstract

The diploma thesis presents a potential of the use of aerial photogrammetry and remote sensing for documentation of areal archaeological objects. The thesis focuses, first of all, on use of the mentioned methods at the Nazca Plate in Peru, where oblique aerial photographs of well-known geoglyphs were taken by non-metric digital camera during the Nasca international research project.

The main goal of the thesis is to discover if by using such method we can document the areal archaeological sites to reach comparable results with data taken by metric cameras. The thesis determines a processing methodology which, with use of the photographs taken by non-metric digital camera, enables to acquire not only contentual but also positional information. The vital steps necessary for securing the required result were the following: elimination of distortion, accentuation of photographs content, photographs rectification and a photoplan created with use of proper masking and mosaicking. Processing was done with the Adobe Photoshop 10.0.1., Topol xT 7.0 Raster and Distortion PM software.

The thesis also solves the problems with processing the data from satellite photography that together with aerial photographs and map materials create the geographic information system of the Nazca Plate.