

Digital orthophotoplans on the territory of Sofia Municipality

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Photogrammetry Department of GIS SOFIA Ltd. produced color digital orthophotoplans at 1:1000 scale of two projects on the territory of Sofia Municipality – Vitosha Yaka and Balkan, covering 58 and 11,4 km² area. The terrain is flat, lightly hilly and hilly not dense urban area with predominantly low buildings. The average height of the terrain above sea level is 700 m.

The fieldwork, consisting of pre-marking of ground control points, as a basis of aerial triangulation, and their determination by GPS Topcon GGD receiver with an accuracy of ± 2 cm in position and ± 3 cm in height, is performed by GIS SOFIA Ltd.

The aerial photography, development of the film and its scanning are performed by Hansa Luftbild Sentronik und Photogrammetrie GmbH (Münster, Germany). Cessna 404 Titan aircraft executes the photo-flight. Totally 405 photographs at approximate 1:5800 scale are taken by aerial camera Zeiss RMK TOP 30/23 (Z/I Imaging). The Kodak Aerocolor Negative Film 2444 III is developed by Colenta processor and scanned at 21 μ m pixel size (12 cm on the terrain) by scanner PhotoScan 2002 (Z/I Imaging).

For performance of the orthorectification a DTM in 5 m square grid is generated by contours with 1 and 5 m interval from available digital information in GIS SOFIA Ltd.

The orthophotoplans are produced by digital photogrammetric workstation PHOTOMOD 4.0 version.