
Orthophotomaps Creation in 1:25,000 Scale in Digital Photogrammetric System PHOTOMOD Using Space Imagery and Quasi-GCP

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Specialists of West-Siberian subsidiary of Cadastral survey of Russia (VISKHAGI) performed works on digital orthophotomaps creation in 1:25,000 scale using spaceborne data. The initial data was space imagery acquired by SPOT-5 satellite with spatial resolution 2.5 metres on terrain.

Photogrammetric processing of the imagery was performed in digital photogrammetric system (DPS) PHOTOMOD 4.1. DEM was created in PHOTOMOD VectOr software. For this we vectorized contour lines, height marks and hydrographic objects on topographic maps in 1:100,000 scale.

Coordinates of ground control points were measured on topographic maps in 1:25,000 scale. Orthophotomaps created cover mountainous areas of Kemerovo oblast, where there are essential height differences on the area of map sheet of 1:25,000 scale.

Method of quasi-GCP was used for aerial triangulation of images block, that allowed to increase accuracy of triangulation in 2-2.5 times, comparing with usual way with normal ground control points.

Applying of this method allows to use maps of the same scale as for resulting maps for office geo-referencing.