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## **Geoinformational support of Novij Urengoj municipal area using remotely sensed data (abstract)**

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Traditional on-ground methods of large scale mapping for cadastre and landuse purposes on fairly big urban areas are very expensive. Most optimal way of mapping such territories and GIS creation is using airborne and spaceborne data that allows cutting down the expenses in several times.

Our company applied such methodology to Novij Urengoj urban area consisting of three settlements and connecting motorway. The distance between settlements is about 80 km and total terrain area to be processed is more than 500 sq.km.

Urban area and cadastral parcels boundaries were defined using space imagery acquired by Quick Bird and SPOT satellites. Two software companies (ZAO Racurs, ZAO Geonadir) were contracted to investigate orthophotomaps accuracy parameters. The research was supplied by the initial space borne data (Quick Bird images). DEMs with different accuracies were compared and the investigation results prove that it is possible to create orthophotos with 1:2,000 scale accuracy using these data.

Photogrammetric processing was done for three blocks in common coordinate system. After airborne data processing in PHOTOMOD system orthophotomaps were created with 1:1,000 scale accuracy. Terrain vectorization in stereomode was done to create digital orthophotomaps in 1:1,000 scale.

Final product – digital topographic map in 1:1,000 scale created using terrain relief features extracted in stereo mode along with topographic interpretation data and designed according to the standard cartographic symbols, it is the basis for accomplishment of different tasks related to the urban areas management.