

## BUILDING AND USING A 3D MODEL OF A MOUNTAINOUS LANDFORM FOR GEOINFORMATIONAL SUPPORT OF TOURISM

**Tatyana E. Elshina**

Siberian State University of Geosystems and Technologies, 10, Plakhotnogo St., Novosibirsk, 630108, Russia, Ph. D., Associate Professor, Department of Cartography and Geoinformatics, phone: (383)361-06-35, e-mail: dony2005@mail.ru

**Irina P. Kokorina**

Siberian State University of Geosystems and Technologies, 10, Plakhotnogo St., Novosibirsk, 630108, Russia, Ph. D., Associate Professor, Department of Cartography and Geoinformatics, phone: (383)361-06-35, e-mail: irusha2008@gmail.com

**Alexander V. Sysoev**

2GIS, 7, K. Marx Square, Novosibirsk, 630048, Russia, Engineer-Cartographer, phone: (999)468-89-50, e-mail: sasha.sysoev.94@mail.ru

The article deals with the creation and use of a 3D model of mountain terrain for geoinformation support of tourism in the Russian Federation on the example of the territory of the Republic of Ingushetia. The aim of the work is to develop and apply a digital 3D model of mountain terrain for use in creating an interactive tourist map on web services, as well as tourist and administrative sites of the republics of the Caucasus. Methods of geoinformational mapping, terrain modeling, cartographic research method and modern software were used: 3D Spatial Analysts, WorldMachine, Unity 3D. The classification of tourism types and objects of natural and cultural heritage in the Republic of Ingushetia is carried out. As a result of the analysis of tourist and administrative sites, as well as web-services of the republics of the Caucasus, a conclusion is made about their insufficient geoinformation support. The possibilities of using 3D models of mountain terrain on web maps for tourism purposes are presented. A digital model of mountainous landform in the Republic of Ingushetia is created. A 3D scene, which shows basic relief forms and objects' location is developed.

**Keywords:** mountainous landform, tourism, North Caucasus, Republic of Ingushetia, web maps, digital elevation model, geoinformation mapping, hypsometric scale, chiaroscuro relief image, 3D scene

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