Abstract

This thesis describes the stereo photogrammetric method used for digitalization of terrain elevation data of choosen area and the applications of digital elevation model (DEM). The main part of the thesis consists of DEM generation methodology, including stereo photogrammetric evaluation of aerial pictures, quality control of evaluating process, DEM creation and revision. DEM was created in software Edras Imagine 8.6. The thesis results in detailed description of DEM creation in the high mountain terrain selected in the High Tatra Mountains. Grid DEM of cell size 1 x 1 meter is attached.

Key words: mountain lakes and catchments, photogrammetry, aerial pictures, DEM