

Sandstone Landscapes in GIS

Abstract

This work is concerned with the representation of sandstone rock formations in digital topographic database. It is based on raster datasets derived from digital relief models created from airborne laser scanning (ALS) data. Objects representing rock faces and their edges, rock pillars and peaks, rugged plateaus, cracks and scattered rocks were created in software *ArcGIS for Desktop* using scripts in *Python*. Some of these objects also contain attributes like classification of the object and elevation. Testing was performed on ALS data with various density of point cloud in geomorphologically different sandstone landscapes in Bohemia. Field research was conducted in one of the places of interest to verify the reliability of the digital relief model.

Key words:

rock formations, sandstone landscapes, digital topographic database, GIS