

Updating of land use cadastral records using satellite data Sentinel-2

Abstract

The aim of the project is to propose a methodical procedure which will classify selected land use classes with an accuracy of more than 80 %. Constructed methodical procedure will have the task of detecting the discrepancy of land reported in the cadastral records with the real state in the landscape identified by satellite Sentinel-2 data classification. Classification of agricultural land classes (arable land, permanent grassland, orchard and vineyards) is solved in this project using multitemporal data Sentinel-2 using object classification methods. The first part of thesis focuses on the literary introduction to the topic of the theme. The second part is devoted to the process of creating a methodical procedure for object classification of land use classes, where parameters are defined by experimental activity and thresholds of the defined classification. The results of the work are compared and evaluated using the overall accuracy and error matrices of the classification using the developed algorithm.

Keywords: cadastral records, multitemporal satellite imagery, object-base classification, Sentinel-2, agricultural land resources