

This work deals with object-based classification of high resolution data. The aim of the thesis (paper, work) is to develop an acceptable classification process of linear features (roads and railways) from high-resolution satellite images.

The first part shows different approaches of the linear feature classification and compares theoretic differences between an object-oriented and a pixel-based classification.

Linear feature classification was created in the second part. The high-resolution QuickBird satellite images showing Prague surroundings were used for this classification. Using Definiens Developer software and the paper of Nobrega et al. (2006) the segmentation and object-based classification was created on the selected area of the satellite image.

Minimum distance method of a pixel-based classification of the same part of image was generated to compare these two methods of classifications.

Another classification was created in an another satellite image to verify developed classification process.

At the end a visual and statistical accuracy assessment was done to compare an object-oriented and a pixel-based classification .