

Abstract

Image processing can be applied to remote sensing using satellite imagery. Satellite imagery is a picture of the earth's surface is recorded by the sensor (camera) on the remote sensing satellites orbiting the earth, in the form of image digitally. This image data can be used for the identification of green open space.

Problems faced is the selection of a method for processing of satellite images should be appropriate to fit the objectives to be achieved. At this final selected Mumford-Shah segmentation method for type-based method is the region where the image will be grouped or segmented based on common characteristics of each area. This fits with the objectives to be achieved, namely the identification of green open space on the satellite image segmentation methods and combined with numerical integration to calculate its area.

The results obtained from testing is the greater coefficient of neighborhood values or the value of v , the smaller area of red region is obtained. Appropriate noise parameters can help the performance of the Mumford-Shah model to segment satellite images. While the disorder can lower the brightness of the Mumford-Shah performance drastically. Then obtained also that the Simpson method of numerical integration methods can be combined with the Mumford-Shah segmentation model to perform extensive calculations with an accuracy of 99.99%.

Keywords: *satellite imagery, segmentation, Mumford-Shah Model, Simpson*