

Change detection using a local similarity measure

ABSTRACT

In this paper, a new method of change detection and identification of forest area is proposed. It is based on local mutual information and image thresholding. In order to identify the forest change area, the image of local mutual information were thresholded using three different threshold value, i.e -0.5, 0 and 0.5. The result is a binary change image. Our result shows that the best threshold value of local mutual information is 0. It has been shown that by using this method, the problem on selecting the threshold value can be solved. This method is simple and suitable to be used to detect the changes area even for the images taken from different modality. For this research, IKONOS image with the resolution of 1.0 m dated 11 March 2002 and SPOT image with the resolution of 2.5 m dated 23 January 2008 in Shah Alam, Selangor have been used.

Keyword: Change detection; Image thresholding; Local similarity measure