Region of Interest Detection for Pregnancy Image Processing

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ABSTRACT

This study discussed on a comparison of three cropping techniques for region of interest (ROI) detection of ultrasonography (USG) image. Ultrasound images are used to provide information about fetal development in the womb. The image generated by the two-dimensional ultrasound has not been able to provide complete information. Therefore, in order get the form of fetus on ultrasound image can be clearly identified with the necessary process of image analysis that can detect the boundaries of objects ROI, so that it can differentiate between one object with another object on the ultrasound image. Comparison results between the ROI detection with cropping methods namely rectanguler, circle and ellipse shapes are expected obtaining the best technique. It can be used in the ultrasound image segmentation process to obtain the best shape of the object of USG image. Based on the available data it can be concluded that the best ROI detection with cropping methods is produced by ellipse shape. The results show that ellipse shape of ROI Detection has the best accuracy compared to other cropping shapes. Based on the results, rectanguler and circle have the similar value. Therefore, MSE of ellipse is lower than rectanguler and circle shapes.

Kata Kunci: *detection, image, ROI,USG.*