ABSTRACT

Panoramic image mosaic can be used for many needed, such as biomedical field (Iskandar,2008), astronomy field (Berriman,2012), satellite image processing (Global Mosaic Satellite Images), and face recognition (Liu and Chen,2003). In making of panoramic image, it's become more difficult if capturing of image using common analog camera or common digital camera because of the feature of camera was limited. Panoramic image mosaicing is one of ways to build panoramic images. This method cans composite parts of images using the correspondence of keypoints between two images or more.

This project built a panoramic image mosaics implementation based on feature-based alignment of images using Scale Invariant Feature Transform algorithm as keypoint(s) initialization (registration) with determine the descriptor, RANSAC algorithm to composite or make an image stitching from matching keypoints and multiband blending image method using a software Matlab 7.8.0 (R2009a) to make an output image that near the real condition.

The result obtained in this final project is a panoramic image mosaic system that can be used to build a panoramic image from two images that has correspondence point to each other. With coefficient of correlation value is 0.78088 and MOS value is 4.1375, those images mosaic panoramic have a strong relation and good quality.

Keyword: Panoramic image, mosaic, SIFT, keypoint, RANSAC, correlation coefficient, MOS