

Abstract

Visual objects that are viewed by human eye can be saved permanently using camera. Technology products shows many results and benefits in various fields, one of them is on photography. Improvement in this field supports science improvement on other fields as well. Using a digital camera we can take pictures according to our wishes. But technology improvements on some digital cameras nowadays still has problems seen, and are still unsolved, sometimes the image output are not as expected.

This final project uses Image Mosaic process that can be a solution for the above problem. Image Mosaic process is a solution that can be done on combining several overlap images to represent a large point of view. By implementing the cylindrical panoramas method on this process, the input images form is first transformed from its original image, created by the digital camera, by changing the world coordinates into 2D cylindrical screen coordinate. Next, research and testing will be done to know the best images which can creating panorama images on a 360° viewpoint, and what parameters that can effect the processing time in the panorama image formation.

Based on the result of the testing done, parameter that affects the processing time which is the camera lens's focal length that is used to take the pictures. This method can also create panorama images up to 360° because it does image perspective improvements by transforming the input image. The best result to combining several images up to 360° when using several images was taken by using a rotating camera on a tripod from afar. Focal length which can be produced the best panoramic image from horizontal angle are 18mm and 28mm, whereas for the vertical angle are 35mm and 55mm.

Key Words : panoramic images, image mosaic, cylindrical panoramas.