

Abstract

Aerial Photogrammetry is one of the products from the fields of geography in taking the object, area, or phenomenon on the surface of the earth. Using kamera with a photographic recording process and by the help of a detector in the form of film. In the application, required proper technique in merging images of aerial photographs in order to gain a broader perspective.

In this final project, stitching method used in order to merging the images. Image stitching or panoramic mosaicing is a method for combining multiple images with overlapping fields of view to produce a panoramic image or picture that has a higher size, so the image has a wider viewing angle. Image stitching takes some of the features of the image as a reference in merging overlapping areas, it's named FAST corner detector.

The results suggest that the FAST corner detector with a threshold $n = 9$ appropriate if used in image stitching process that resulted in three classes based on the panoramic image of the cross correlation results, which is the upper class ($cc > 0.9$) on the image with stitching horizontal, diagonal and vertical, the medium class ($0.8 < cc < 0.9$) on the image with stitching involves rotation and the lower class ($cc < 0.8$) on a stitched image with scale.

Keywords: Image Stitching, FAST Corner Detector, SURF, Registration