Abstract

Image stitching or photo stitching is the process of combining multiple photographic images with overlapping fields of view to produce a segmented panorama or high-resolution image. Commonly performed through the use of computer software, most approaches to image stitching require nearly exact overlaps between images and identical exposures to produce seamless results. It is also known as mosaicing.

On this final project, developing automatic panoramic image stitching using object recognition techniques based on invariant local features. Invariant local feature method used is the algorithm SIFT (scale invariant Feature Transform). Scale invariant feature transform is an algorithm in Computer Vision to detect and describe the features of local image. SIFT has a resilience that strong against scaling, rotation and change of perspective image. SIFT is also resistant to changes in the intensity of lighting and noise.

The results showed that images stitching using this method can resolve difference of scale, difference of rotaition, and difference of illumination.

Keyword: *image stitching, scale invariant feature transform, random sample consesnsus, k-d tree, blending image.*