

ABSTRACT

Stereovision is a way that used to get a stereo image of an object with the same point of view but from two different positions. Stereo image obtained from the laying of the two cameras on the same field with a certain distance. The distance between the two cameras will generate disparity. Depth of the object obtained disparity in results can be modeled in three dimensions. One method to get disparity is Sum of Absolute Differences (SAD). The output of SAD still can not to be detected properly, therefore needed a method to be able to fix it, The method used to improve the output of the SAD level set method.

In this final project, a simulation designed to reconstruct the simple object in 3 dimensionals by level set method based on stereovision. The stages of the process, stereo image combined with SAD method, then the result will be improved with the level set method. The process is carried out at SAD which is stereo correspondence and disparity mapping. While that is done, process on level set level set method are init vector ENO3 (level set initialization parameter vector mode), init kappa (level set initialization parameter kappa mode), the evolution of the vector using ENO3 scheme, using the kappa evolution ENO3 scheme, determine the value of phi update and get the output level set method.

The result obtained better take a picture during dark condition, MOS results obtained in the dark is 2,80. Distance between two camera is best to use 35cm, MOS result obtained are 4,3 and 3,67 for object kotak2 and tabung1.

Keywords: *disparity, depth, metode level set, SAD, stereovision, 3D*