ABSTRACT

Photography result is a 2-dimensional image which has the properties of a realist, which can describe objects captured as closely as possible to the original. Best results 2-dimensional image acquisition still has shortcoming, which can not be seen from different viewpoints. Of this lack of information 2-dimensional image began to be replaced with a 3-dimensional image, but it is still uncertain what method is good in all aspects to perform 3D reconstruction from 2-dimensional images.

This final project is analyzing a 3D reconstruction from 2-dimensional images of the methods of Generalized Voxel Coloring (GVC). GVC-IB method is a method to perform a 3D reconstruction with the help of item-buffer to find the corresponding voxels to each other based on color. From the results of the 3D reconstruction GVC method is analyzed the influence of voxel size and thresholding value of the reconstruction results.

The analysis result of this 3D reconstructions with GCV-IB method produced by 4 images taken at 90° angles difference with $1mm^3$ voxel size and thresholding value 25 which has 3522 voxel number and 13.03811 seconds of computation time .

Keywords: *Generalized Voxel Coloring, item buffer, 3D reconstruction*