

ABSTRACT

3D modeling is the process of developing a mathematical representation of each surface of an object (living or inanimate) with techniques in 3D processing through special software. One application for the purposes of 3D modeling of imaging is based on Photogrammetry Techniques. Photogrammetry is the art, science, and technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring, and interpreting photographic images. One of the uses of this technique in the field of modeling is 3D imagery which is used to analyze the manufacture of certain models on an object that has a shape such as not flat, has a rough texture, there is curvature on the sides, and so on.

In this final project, the author will design a 3D image formation system with close range photogrammetry techniques from camera images. Furthermore, from this data, the parameter values X, Y, and Z are determined to obtain in-line beams of each camera's Field of View (FOV).

This research focuses on processing digital image data from stone objects, frog statues, and blocky into a 3D photogrammetric model to analyze constraints in the photogrammetric process, especially for measuring large amounts of data.

Keywords: Close Range Photogrammetry, Webcam, 3D Model, Objects