# 3D Image Reconstruction by Space Carving Algorithm from N Arbitrary Images

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## Abstract

*Many different techniques have been applied to the reconstruction of three dimensional shapes from image sequences.This paper considers the computing of 3D shape of an unknown, arbitrarily-shaped scene from multiple 2D photographs taken at known but arbitrarily-distributed viewpoints. This will give an algorithm, called Space Carving for computing 3D shape and presents experimental results from applying it to the reconstruction of three-dimensional objects from several photographs. This proposed system studies that the transformation of 2D images to 3D image by computing the photo consistency of given input sequence. The system will create bounding box model from each image's camera coordinate parameters and use number of voxels for checking consistency. It shows the processing time of each input sequence and proves that if the final volume (number of voxels) is increased, the processing time will also be increased. Space Carving algorithm uses silhouette information for effectiveness of checking consistency so that there is no correspondence problem occurred in stereo matching approach.*