In the process of creating architectural scenes from photographs using Model-based Stereo, the geometric model is used as prior information to solve correspondence problems and recover the depth or disparity of real scenes. This paper presents an Image Subregioning algorithm that divides left and right images into several rectangular sub-images. The division is done according to the estimated depth of real scenes using a Heuristic Approach. The depth difference between the reality and the model can be partitioned into each depth level. This reduces disparity search range in the Similarity Function.

For architectural scenes with complex depth, experiments using the above approach show that accurate disparity maps and better results when rendering scenes can be achieved by the proposed algorithm.