

This thesis deals with the problem of creating textures from photographs, especially for a computer model of buildings. The fact that images are taken from different views and border points of a texture are known is supposed in this thesis. Within the frame of this thesis a system for texture extraction from photographs, searching correspondences in textures and merging textures from different views to the final high quality texture suitable for a given model was developed. The problem of registration textures obtained from different images is solved both by feature method based on SIFT descriptors and by method arisen from a deformation model. The implemented methods are also applicable for texturing of huge models in sufficient quality. We restrict our task to texturing 3D surface models built up from planar faces.