

ABSTRACT

Inpainting, in its traditional means, is a process to redraw or to restore damaged parts in a painting which has cracks because of one or other causes. In more broader definition inpainting could also be applied to modify image in a way to make observer who does not know the original image could still identify the modified image as good image. Digital inpainting tried to digitize that process and tried to automate it to some degree. Exemplar based image inpainting is one method of inpainting which tried to improve Structurebased image inpainting which has difficulty in processing texture, by combining Structure based inpainting with Texture Synthesis method, so the results could handle both linear structure and texture. This final project also tried to improve Exemplar based inpainting more by limiting the source region in its Texture synthesis sub-process. Objective tests was done by using five test images with 30 iteration of target region in random position to test influence of patch size, source region size, and target region size(damaged area size). Subjective tests was done by doing MOS based survey to 81 respondents for 12 test images with particular characteristics.

Keywords: *Inpainting, Structure based inpainting, Texture Synthesis, Exemplar Based Image Inpainting, source region, target region, MOS*