

Digital Inpainting

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Abstract

Digital inpainting uses spatial or frequency information to restore partially damaged/removed photos and artworks. Digital image inpainting is an interesting new research topic in multimedia computing and image processing since 2000. This talk will cover the most recent contributions in digital image inpainting and image completion, as well as concepts in video inpainting. In addition to a quick survey, the presentation will cover several algorithms. Most restoration algorithms consider a picture as a single layer. The talk will cover a new approach, which divides a Chinese painting into several layers. Each layer is inpainted separately. A layer fusion mechanism then finds the optimal inpaint among layers, which are restored layer-by-layer. We apply the algorithm on Chinese and western drawing. The result shows a high PSNR value as well as a high user satisfaction. The demonstration of our work is available at: <http://www.mine.tku.edu.tw/demos/inpaint>.