



Video Face Replacement System Using a Modified Poisson Blending Technique

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Abstract:

In this paper, we present a system for video face replacement that requires only two videos of a source actor and a target actor using only a single digital camera. Existing video face replacement techniques usually need special equipment or 3D models; the proposed system achieves a realistic replacement of faces without using 3D models or special equipment. There are many applications of the proposed system that are presented in this paper using only two footages of actors. We can replace a frontal face with another one; this gives the possibility to change the appearance of actors without makeup or any prior settings. We introduce a new technique for face blending that is based on a gradient domain method called Modified Poisson Blending (MPB) to reduce the bleeding problem of Poisson image editing, and achieve realistic results of face replacement. Experimental results demonstrate that the proposed system using MPB technique produces more realistic results than the results of other cloning techniques.

Keywords:

Image Inpainting Video Inpainting Image Enhancement Face Replacement Video Editing Poisson Blending Gradient Domain Image Editing

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