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Title: A Method of Single Reference Image based Scene Relighting

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Title: A Method of Single Reference Image based Scene Relighting

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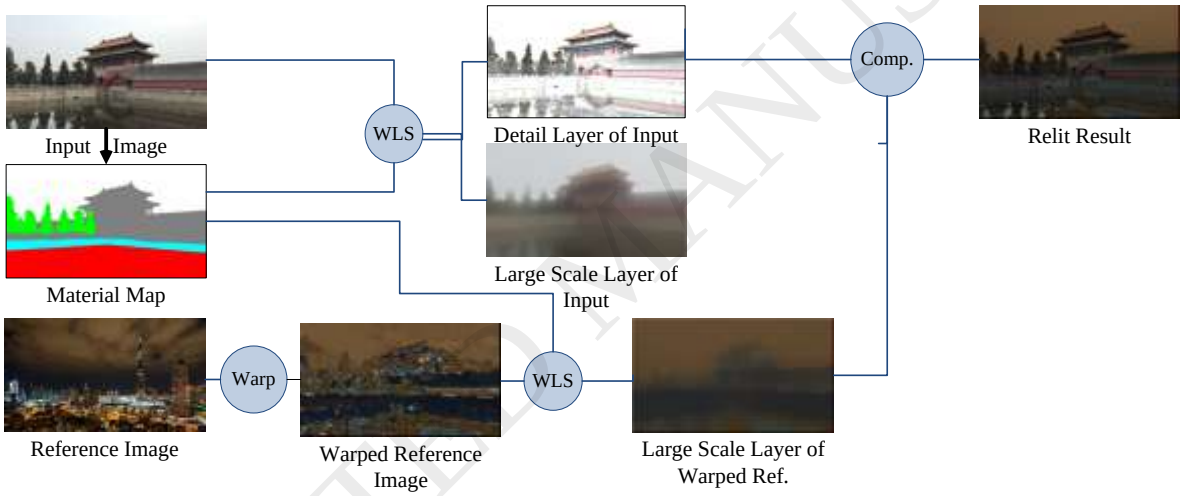
Graphical abstract



Our proposed method can be divided into 4 steps, as shown in Fig. 1 (1) the input image is segmented to the material map using the method of Bell et al. [1]. Every pixel of the material map is assigned by a material label; (2) the reference image is warped to the structure of the input image by the patch match warping; (3) each channel of the input image and the reference is decomposed to large-scale layer and detail layer under material constrain; (4) the final relit results are obtained by composing the details of the input image and the large-scale layer of the warped reference image.

Abstract: Image relighting is to change the illumination of an image to a target illumination effect without known the original scene geometry, material information and illumination condition. We propose a novel outdoor scene relighting method, which needs only a single reference image and is based on material constrained layer decomposition. Firstly, the material map is extracted from the input image. Then, the reference image is warped to the input image through patch match based image warping. Lastly, the input image is relit using material

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