

Improved Image Fusion for Context Enhancement

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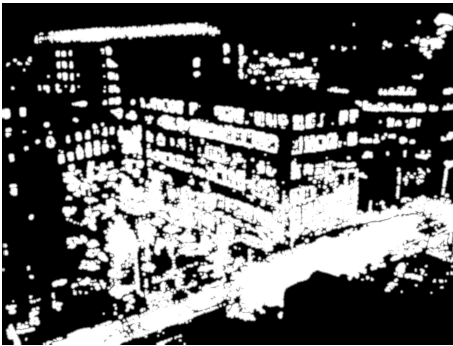
City at nighttime
[Raskar, Ilie and Yu, 2004]
citynight



City in daytime
[Raskar, Ilie and Yu, 2004]
cityday



Context enhancement by gradient domain fusion
[Raskar, Ilie and Yu, 2004] *
based on [Perez, Gangnet and Blake, 2003]



Importance mask for use in image fusion
[Raskar, Ilie and Yu, 2004] *
citymask



Linear interpolation of pixel colors
[Porter and Duff, 1984] *
tinearcomposite(citynight,cityday,citymask)



Contrast preserving pyramid compositing
[Grundland, et al., 2006a] *
contrastpyramidcomposite(citynight,cityday,citymask,10,1)



Linear interpolation using Laplacian pyramids
[Burt and Adelson, 1983] *
tinearpyramidcomposite(citynight,cityday,citymask,10,1)



Coefficient selection using Laplacian pyramids
[Burt, 1984] *
tinearpyramidcomposite(citynight,cityday,citymask,10,tnf)



Weighted power mean using Laplacian pyramids
[Grundland, et al., 2006b] *
tinearpyramidcomposite(citynight,cityday,citymask,10,4)



Saliency preserving pyramid compositing
[Grundland, et al., 2006a] **
saliencypyramidcomposite(citynight,cityday,0.4,10,1,4,0,0,0,1,64)



Low cost saliency pyramid compositing
[Dodgson, et al., 2006] **
saliencypyramidcomposite(citynight,cityday,0.4,10,1,4,0,0,0,4)



Contrast enhanced saliency pyramid compositing
[Grundland, et al., 2006a, 2006b] **
saliencypyramidcomposite(citynight,cityday,0.4,10,4,4,0,0,0,1,64)

* Image blending guided using the importance mask [Raskar, Ilie and Yu, 2004], requiring an additional “clean plate” reference image.

** Image blending guided using multiresolution saliency masks [Grundland, et al., 2006a], combining 40% night with 60% day.

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