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IJCA Proceedings on National Conference on
Recent Trends in Computer Science and Engineering

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MEDHA 2015 - Number 1

Year of Publication: 2015

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{bibtex}medha8011.bib{/bibtex}

Abstract

Image fusion is maintaining the spectral quality of the Multispectral (MS) image while retaining the spatial quality of the panchromatic image (PAN) image. Image fusion is a good alternative for increasing interpretability of MS image by inserting spatial information from PAN image to MS image. For the image fusion traditional IHS (intensity, hue and saturation) have been used, but this leads to out of gamut problem. Out of gamut leads to color distortion and contrast

reduction in the resultant fused image. In this paper improved nonlinear IHS image fusion is used, which solves the out of gamut problem. But, due to the large intensity differences between PAN image and MS image, leads to color distortion. This paper proposes and implemented adding spatial information from PAN image to MS image rather than conventional intensity substitution. DWT (Discrete Wavelet Transformation) is used for getting spatial information from PAN image that will be added to MS image. This solves the color distortion due to large intensity difference between MS and PAN image and preserves spectral quality of MS image in the fused image.

Refer

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Index Terms

Computer Science

Image Processing

Keywords

Ihs His Nonlinear Ihs Wavelet.