Abstract

The complementary nature of medical imaging sensors of different modalities, (X-ray, Magnetic Resonance Imaging (MRI), Computed Tomography (CT)), all brought a great need of image fusion to extract relevant information from medical images. Medical image fusion using Stationary wavelet transform (SWT) and optimize result using genetic algorithm (GA) has been implemented and demonstrated in PC MATLAB. In this paper medical CT and MRI images are fused. To overcomes the discrete wavelet transform (DWT) problems that suffers from translation variant property which may extract different feature from two source images taken from same sensor with only slight movement. This paper utilizes SWT instead of DWT to get rid of these restrictions and performance of purposed algorithm is measured by peak signal to
noise ratio (PSNR), entropy, root mean square error (RMSE), standard deviation.

References


Index Terms

Computer Science

Bio-medical
Keywords
Medical Image Fusion  Stationary Wavelet Transform  Genetic Algorithm  Psnr