Abstract

Image fusion has the very wider scope in medical sciences. Medical Images are obtained from different type of equipments and are of different modalities, each of them carries altogether different information. Especially study of brain images and its features is of greater interest for doctors since several centuries. Now because of radiology and evolution computers made this possible to look in to head online. This posed several challenges for software engineers to produce the good quality images or stream of images. Since medical images are from different modalities, which made it difficult to produce a single image from all these images. With the help of several image processing algorithms it is now possible to fuse the images. This gave rise to another challenge for producing efficient algorithm. This paper proposes the Redundant discrete wavelet transform (RDWT) based algorithm for image fusion, and compares with the other DWT based methods. These methods are assessed on the basis of statistical measures such as entropy, mean and standard deviation. According to the assessment made, it is found that the proposed method is giving better results. The Brain atlas based images are considered as input.
- The Whole Brain Atlas- Harvard Medical School www.med.harvard.edu/aanlib/
- Eduardo Fernández Canga, "IMAGE FUSION"; Project report for the degree of ME. in Electrical & Electronic Engineering
- Dennis L. Hartmann ATMS 552 Notes: Section 9: Wavelets Page 240-258

**Index Terms**

Computer Science

Signal Processing
Keywords
Multimodal Image Fusion  DWT based image fusion  Pixel level image fusion  RDWT based image fusion method