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A Multi Sensor Monochrome Video Fusion Using Image Quality Assessment

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Abstract : The increasing interest in image fusion (combining images of two or more modalities such as infrared and visible light radiation) has led to a need for accurate and reliable image assessment methods. This paper gives a novel approach of merging the information content from several videos taken from the same scene in order to rack up a combined video that contains the finest information coming from different source videos. This process is known as video fusion which helps in providing superior quality (The term quality, connote measurement on the particular application.) image than the source images. In this technique different sensors (whose redundant information can be reduced) are used for various cameras that are imperative for capturing the required images and also help in reducing. In this paper Image fusion technique based on multi-resolution singular value decomposition (MSVD) has been used. The image fusion by MSVD is almost similar to that of wavelets. The idea behind MSVD is to replace the FIR filters in wavelet transform with singular value decomposition (SVD). It is computationally very simple and is well suited for real time applications like in remote sensing and in astronomy.

Keywords : multi sensor image fusion, MSVD, image processing, monochrome video
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