



SUBJECTIVE EVALUATION OF EFFECTS OF SPECTRAL AND SPATIAL REDUNDANCY REDUCTION ON STEREO IMAGES (MonAmOR10)

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★ Abstract :

Human visual system is more sensitive to luminance than to chrominance. In order to reduce information that is not perceived by human visual system, color channels are downsampled while keeping luminance as original. Similarly in stereo case, human visual system uses high frequency information from the high resolution image of the mixed resolution image pair. By downsampling one of the pair, higher compression is achieved in stereo image coding. In this paper, we have examined downsampling color channels in higher ratios in color stereo image pairs. In our experiments, we have used “double-stimulus continuous-quality scale” (DSCQS) method. We have found out that the depth perception is not changed by compression or filtering. However, in order to keep perceived image quality similar to the original stereo pair, filtering should be applied to chrominance but not to luminance channels.