Performance Assessment of Algorithms for Generation of High Resolution

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Abstract - Literature review revealed that there has been a considerable interest to produce high resolution images from low resolution images either from a single image or from a sequence of images for the purpose of surveillance, medical diagnosis, unmanned Aerial Vehicle guidance . Currently there are several techniques for color image up-sampling . However, there is a lack of a common platform to reliably quantify the perceived quality of up-sampled images for performance comparison . In this paper, we study four techniques (three from pixel interpolation, and one from Example- based method)on verity of images based on the Mean Square Error (MSE) ,SCIELAB quality and structural similarity error measures (SSIM) . The results indicate that the data-dependent triangle interpolation gives least SSIM errors while the example based resolution gives the least color reproduction error without any art crafts .