Abstract

Haze formation is the blend of air-light and attenuation. Attenuation reduces the contrast and air-light enlarges the whiteness in the captured image. Fog and haze are atmospheric conditions generated by floating particles, degrade the quality of images. Haze removal algorithms have become more beneficial for several vision applications. As we know there is no single technique i.e. accurate for all different kind of problems and circumstances. The existing approaches have neglected many issues like noise reduction and non-uniform illumination which will be presented in the output image of the existing haze removal algorithms. This dissertation has proposed a new haze removal technique HDCP which will integrate improved dark channel prior with histogram equalization to remove the haze from color images and weighted guided filter is used to decrease noise from images. The proposed algorithm is implemented and tested in MATLAB. The results have shown that the proposed algorithm has shown quite effective results.

Index Terms
Computer Science  Image Processing
Keywords

Attenuation, Air-light, Weighted guided filter, Bilateral filter, Histogram Equalization.