Abstract

Haze formation is the combination of airlight and attenuation. Attenuation decreases the contrast and airlight increases the whiteness in the scene. Atmospheric conditions created by floating particles such as fog and haze, severely degrade image quality. Removing haze from single image of a weather degraded scene found to be a difficult task because the haze is dependent on the unknown depth information, haze removal algorithms become more beneficial for many vision applications such as surveillance system, object detection, tracking and segmentation.

This work focuses on removing block artifacts and degradation factors from a natural scene image containing fog, haze such that the enhancement of that image becomes very easy. In this paper Derived Guided Filter based visibility restoration approach will be used in order to solve the inadequate estimation of transmission map and color cast problem. The Dark Channel Prior along with derived Guided Filter is selected with an aim to apply techniques such as denoising, color correction, and implementing other forms of enhancement in a single image dehazing.
References


Index Terms

Computer Science Image Processing
Keywords

Dark Channel Prior, Derived Guided Filter, Dehazing, Fog, Haze, Transmission Map