Transmission Map

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Last time, we talked about DCP. Due to this doscovery, the transmssion map$\tilde{t}(x)$is obtained from the DCP accordding to the equation:

$$\tilde{t}(x) = 1 - \min_{y \in \Omega(x)} (\min_{c} \frac{I^c(y)}{A^c}) \tag{1}$$

However, in fact, the pixel value of dark channel, $J^{dark}(x)$, is not equivalent to zero completely. So, in order to make the image looked natural, we need to retain a small amount of haze by using a constant ω ($0<\omega<1$):

$$\tilde{t}(x) = 1 - \omega \min_{y \in \Omega(x)} (\min_{c} \frac{I^c(y)}{A^c}) \tag{2}$$

And inadvertently, we compensate for the under-estimation of $\tilde{t}(x)$ by multiplying ω.

Figure 1: haze image

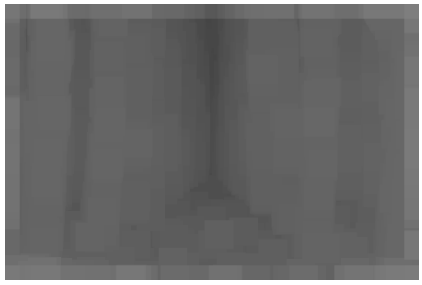

Figure 2: transmission map