

# Patch Size

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It's fatal of the estimation of transmission map for the image dehazing, the equation as you see at (1).

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

And in fact, another key parameter in the algorithm is the patch size in (1). On one hand, the dark channel prior [1] becomes better for a larger patch size because the probability that a patch contains a dark pixel is increased. We can see at the Fig.1: the larger the patch size, the darker the dark channel.



Figure 1: A haze-free image and its dark channels using  $3 \times 3$  and  $15 \times 15$  patches, respectively.

## References

- [1] Kaiming He, Jian Sun, and Xiaoou Tang. Single image haze removal using dark channel prior. *IEEE Transactions on Pattern Analysis Machine Intelligence*, 33(12):2341–2353, 2011.