

Attenuation: Atmospheric (fog, haze)

- z_n and z_f : near and far depth-cue plane
- s_n and s_f : scale factors
- I_{dc} : depth cue color
- Given $z_n < z_0 < z_f$
interpolate $s_n < s_0 < s_f$

- Adjust intensity

$$I' = s_0 I + (1 - s_0) I_{dc}$$

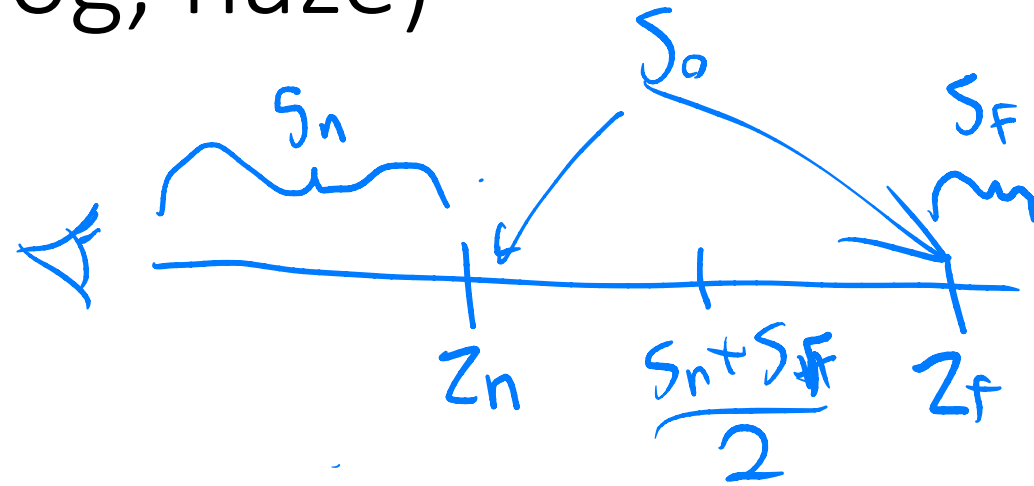
↑
original
color

fog: $I_{dc} = (1, 1, 1)$
 close: no fog
 far: all fog

$s_n = 1$
 $s_f = 0$

Haze: $I_{dc} = (1, 0.9, 0.8)$
 close: haze
 far: most fog

$s_n = 0.8$
 $s_f = 0.01$



Multiple Light Sources

O_d = diffuse color
 k_a = modify color for ambient
 k_d = modifier for diffuse
 k_s = modifier for light color

color

Obvious summation over m lights:

$$I = I_a k_a O_d + \sum_{1 \leq i \leq m} f_{att} I_{pi} [k_d O_d (N \cdot L_i) + k_s (R_i \cdot V)^n]$$

I_a = ambient light color
 $f_{att} i$ = attenuation of i 'th light
 I_{pi} = color of point light i
 $N \cdot L_i$ = diffuse contribution for L_i
 $R_i \cdot V$ = specular contribution for L_i
 n = specular power (relatively large)