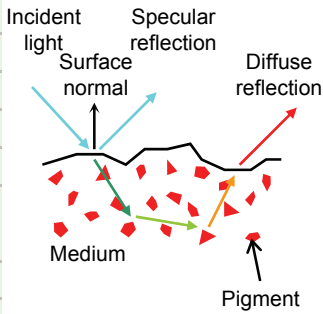


Daisuke Miyazaki, Takushi Shibata, Katsushi Ikeuchi,  
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Polarization,"  
Proceedings of International Workshop on Photometric Analysis for Computer Vision,  
Rio de Janeiro, Brazil, 2007.10

# Wavelet-Texture Method: Appearance Compression by Daubechies Wavelet, Reflection Model, and Polarization

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## → Reflection

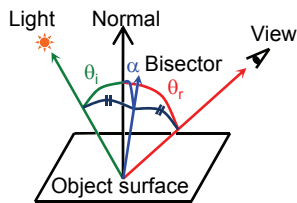


## → Parameter

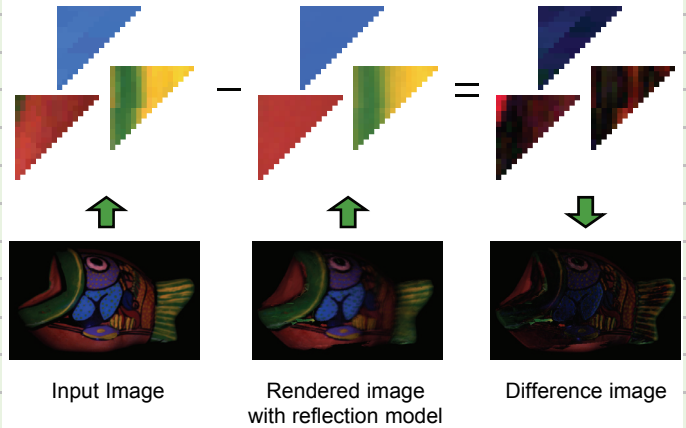
$$I = I_d + I_s$$

$$= K_d \cos \theta_i + K_s \frac{1}{\cos \theta_r} \exp\left(-\frac{\alpha^2}{2\sigma^2}\right)$$

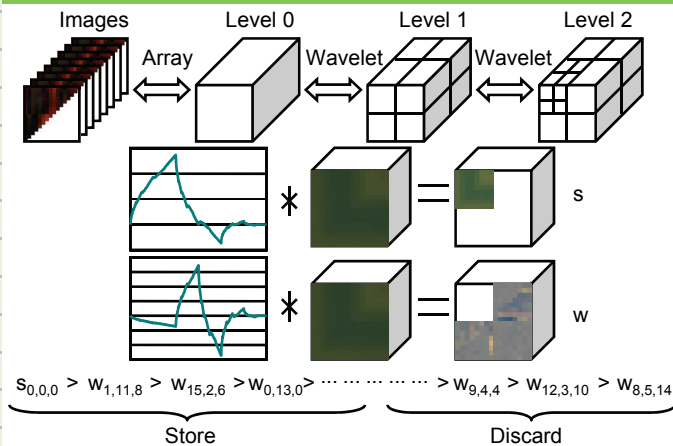
diffuse specular  
 $K_d$ : diffuse albedo  
 $K_s$ : specular albedo  
 $\sigma$ : surface roughness



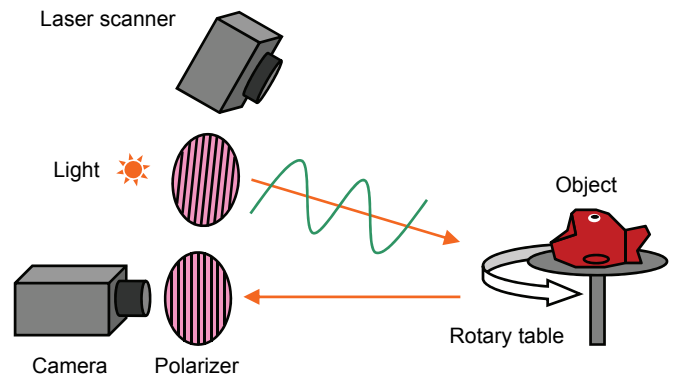
## → Residual



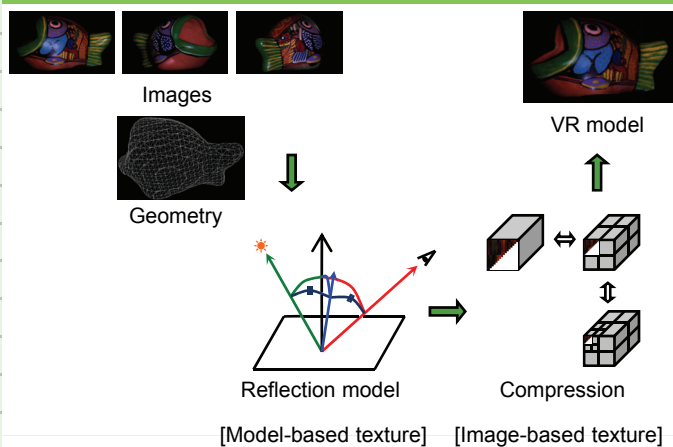
## → Wavelet Compression



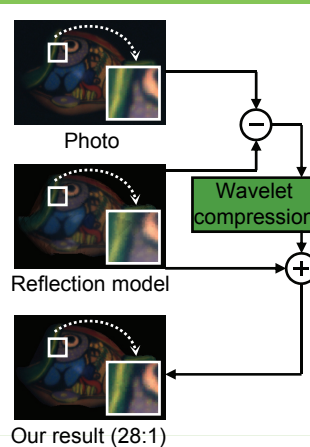
## → Measurement Setup



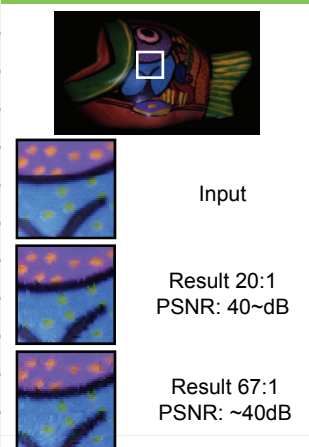
## → System Flow



## → Result



## → Quality



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## 📄 Publication

- [1]Daisuke Miyazaki, Takushi Shibata, Katsushi Ikeuchi, "Wavelet-Texture Method: Appearance Compression by Daubechies Wavelet, Reflection Model, and Polarization," Proceedings on Workshop on Photometric Analysis for Computer Vision, Rio de Janeiro, Brazil, Oct. 2007.
- [2]宮崎大輔, 柴田卓司, 池内克史, "Wavelet-Texture法: Daubechiesウェーブレットとパラメトリック反射モデルと円偏光板によるBTF圧縮," 電子情報通信学会論文誌D, Vol. J90-D, No. 8, pp. 2081-2093, 2007年8月.