

#### Dingzeyu

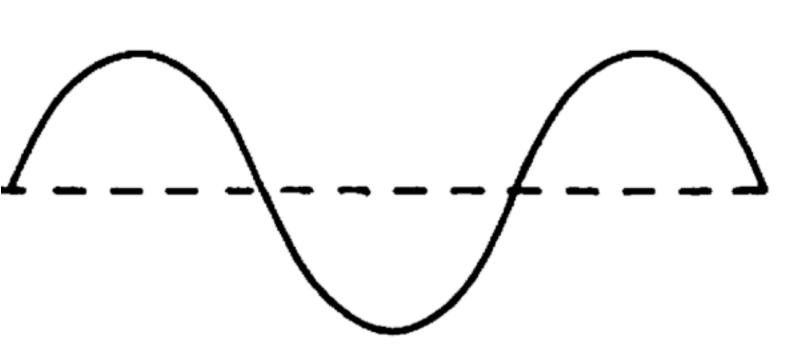
COLUMBIA COMPUTER GRAPHICS GROUP

Oct 24, 2017

Invisibility: Contrast Threshold

[Bijl et al., Vision Research 1989]

### [Campbell and Robson, Journal of Physiology 1968]



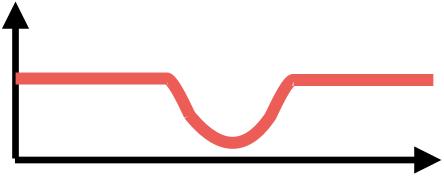
### contrast

$$= \frac{L_{max} - L_{min}}{\bar{L}}$$

intensity pattern

### 0.1% - 10%

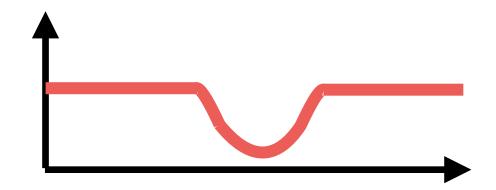
Contrast threshold is the minimal contrast required to see the target reliably.



## Invisibility: Contrast Threshold

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0.1% - 10%

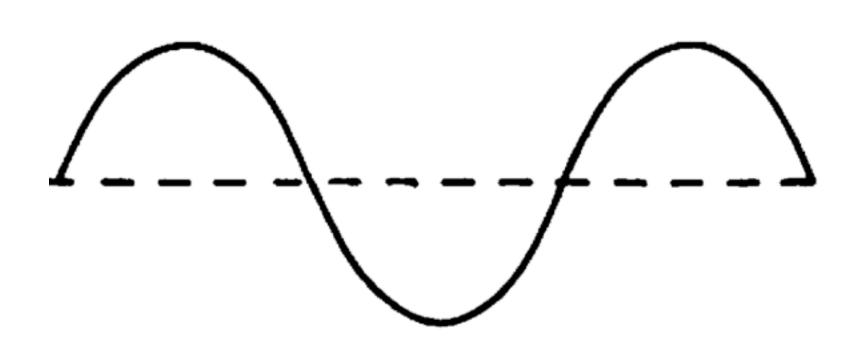


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contrast

$$=\frac{L_{max}-L_{min}}{\bar{L}}$$

intensity pattern



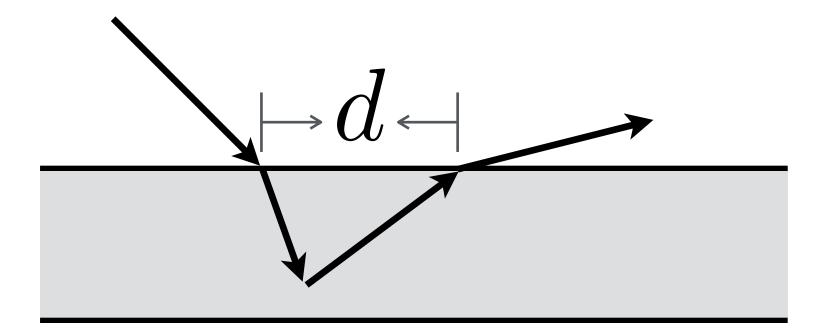
[Campbell and Robson, Journal of Physiology 1968] [Bijl et al., Vision Research 1989]



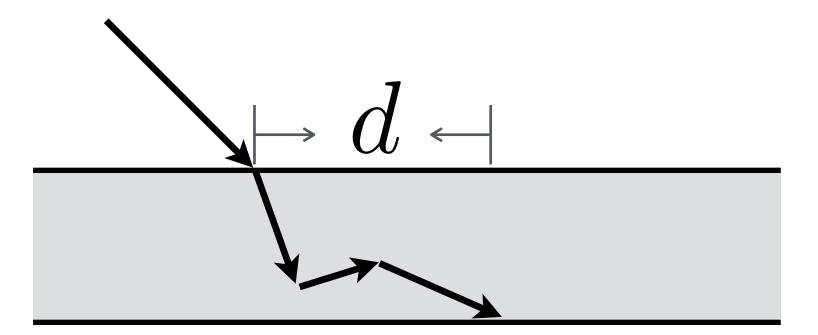
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# Layered Scattering Model

Reflection profile  $\,R(d)\,$ 



Transmission profile T(d)



[Donner and Jensen, SIGGRAPH 2005]

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