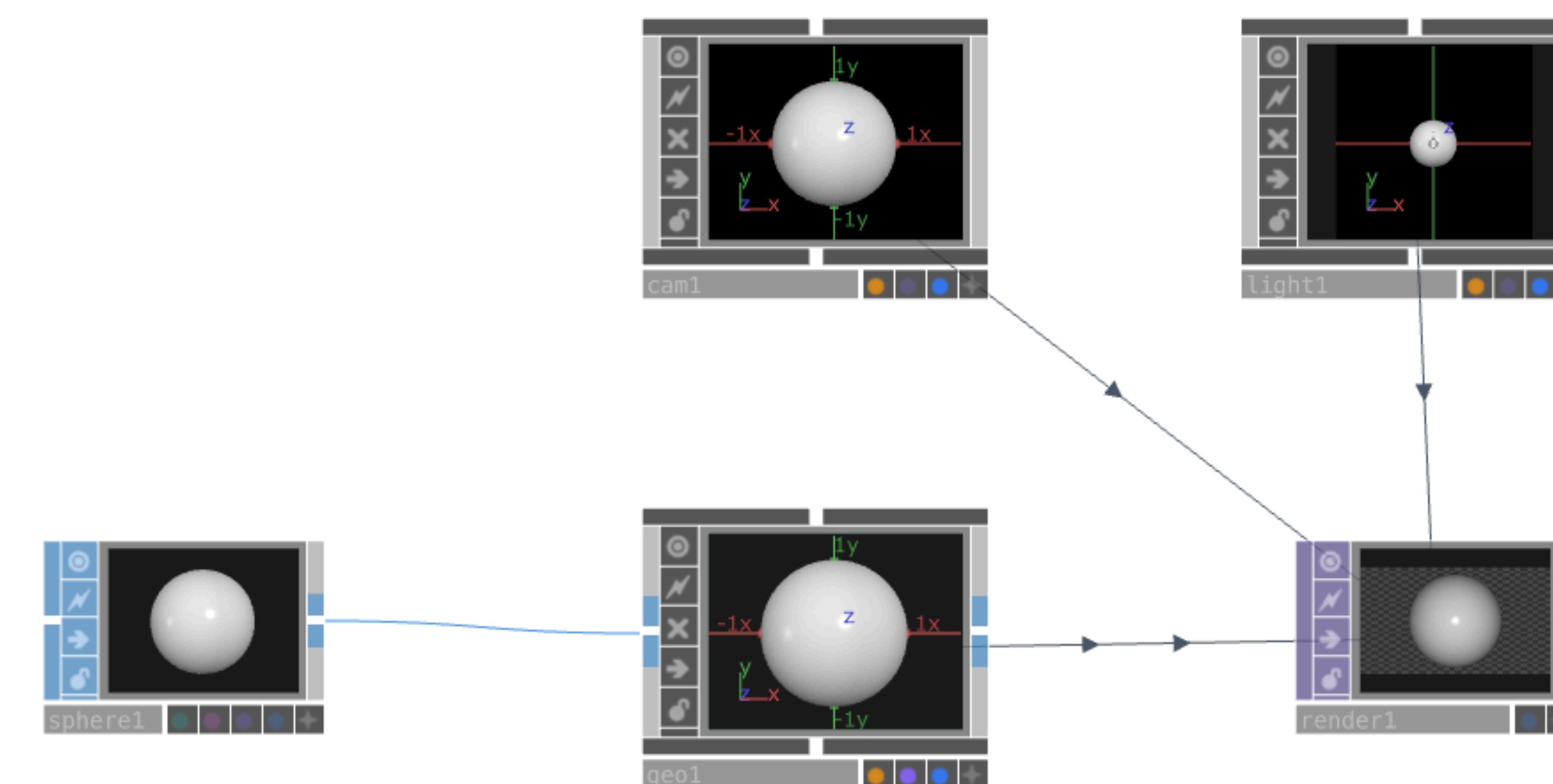

Lighting Technique in Computer Graphics

Camera, Light & Render

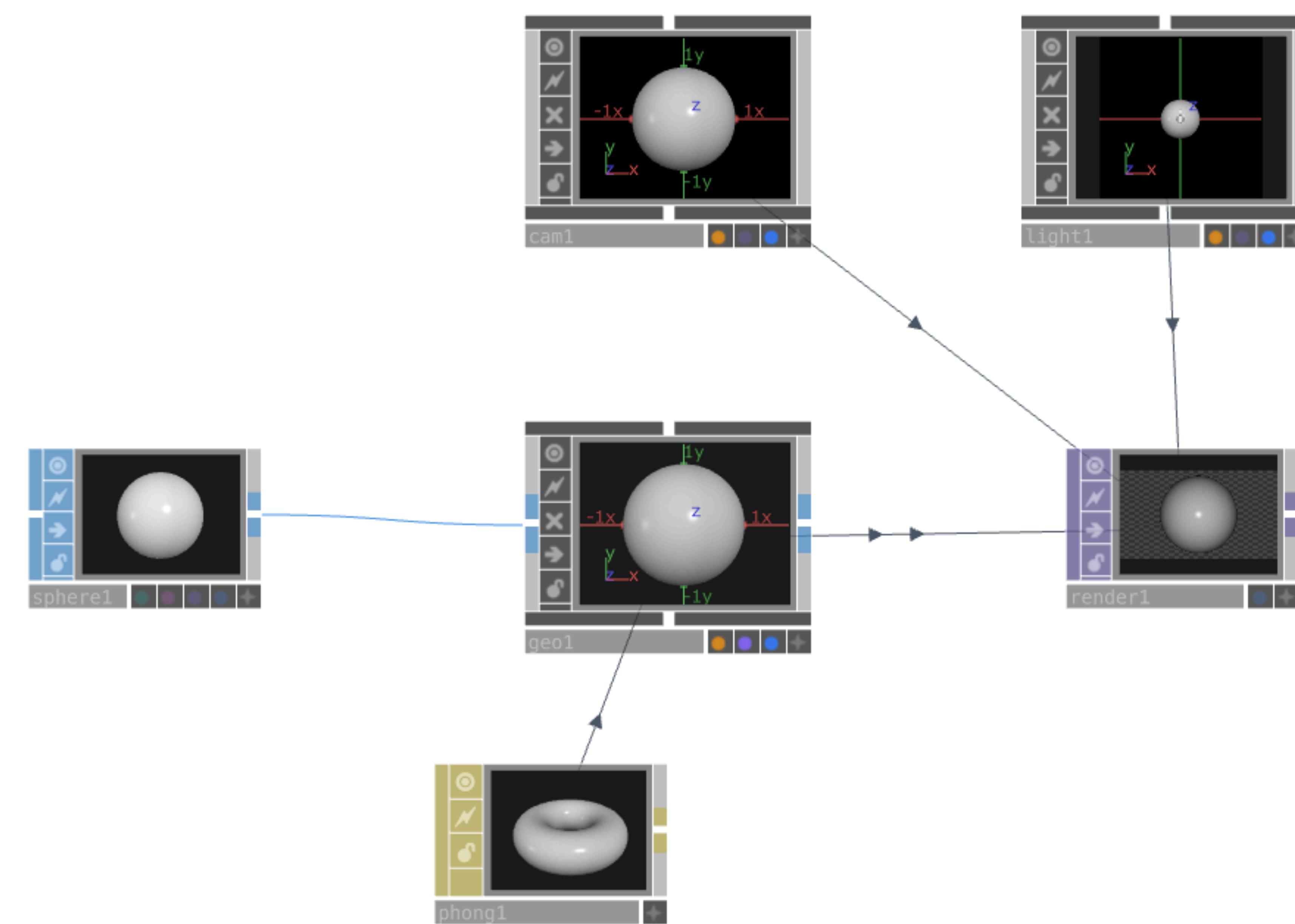
Gwangyu Lee

What is Render?

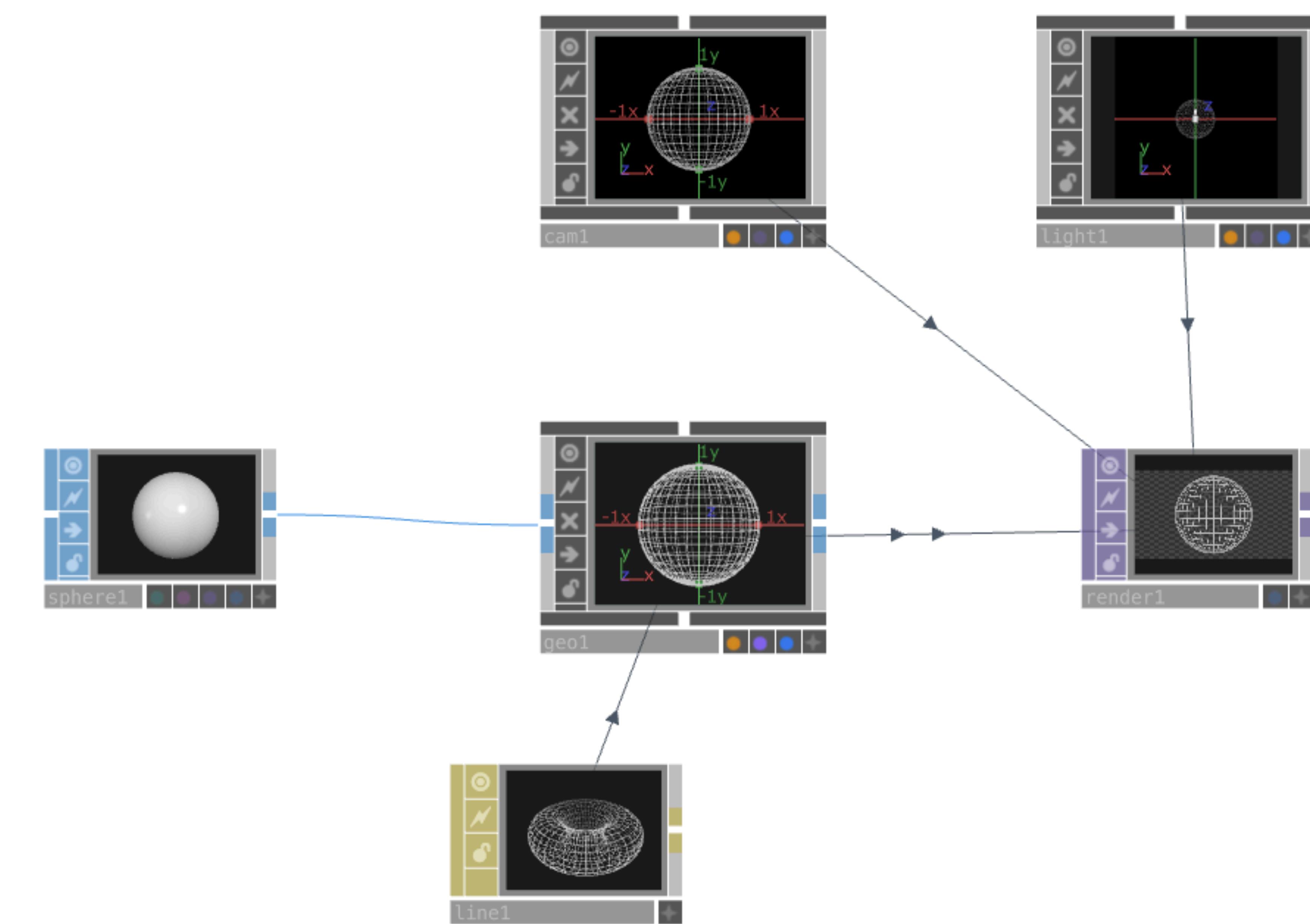
Render



Photorealistic



Non-photorealistic



Photorealistic

vs

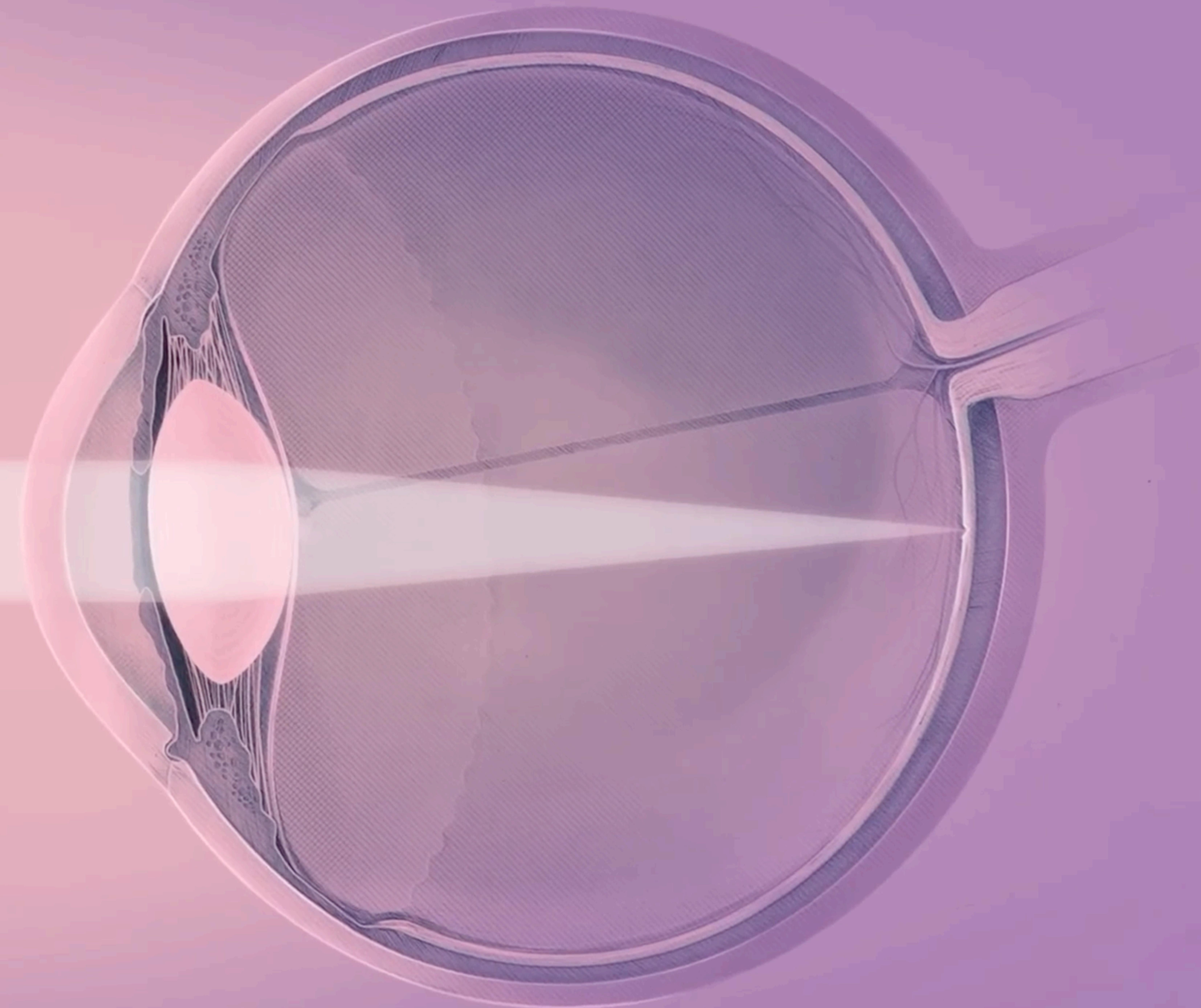
Non-photorealistic

Photorealistic vs Non-photorealistic

- Focus
- Distortion
- Motion Blur
- Color
- Ratio

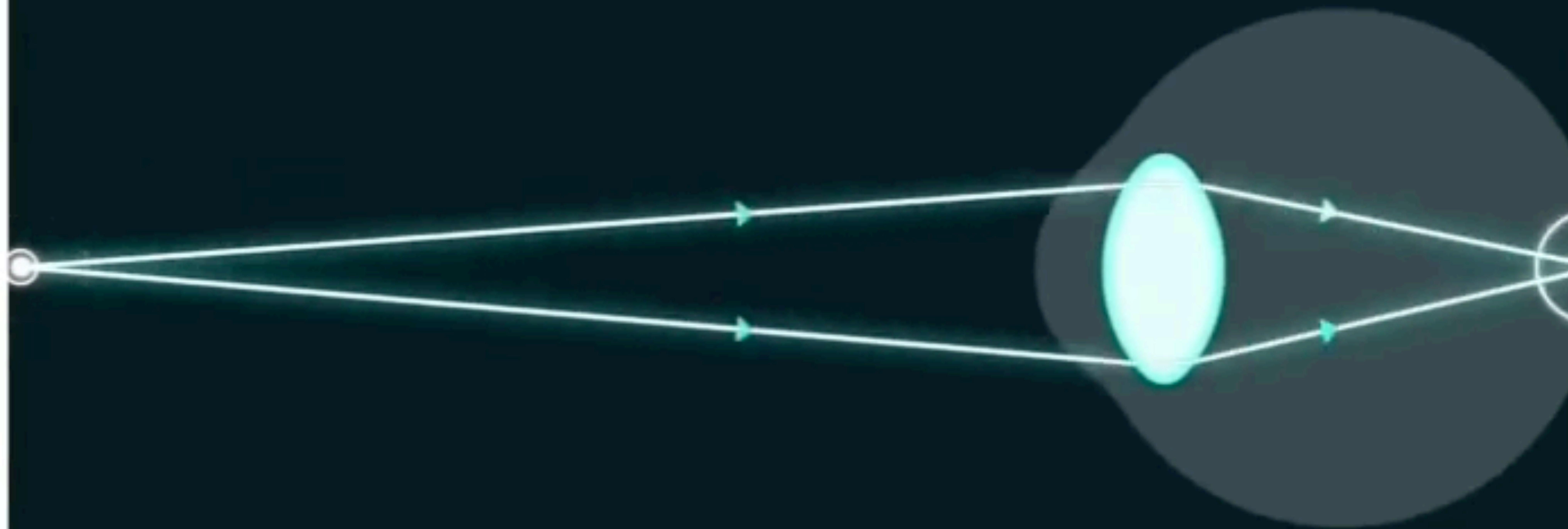
A close-up photograph of a person's face, focusing on their eyes and forehead. The person is wearing round, dark-rimmed glasses and a yellow baseball cap. They are looking slightly upwards and to the right. The background is a blurred landscape with rolling hills under a clear blue sky.

Focus



HUMAN EYE

RAY-DIAGRAM

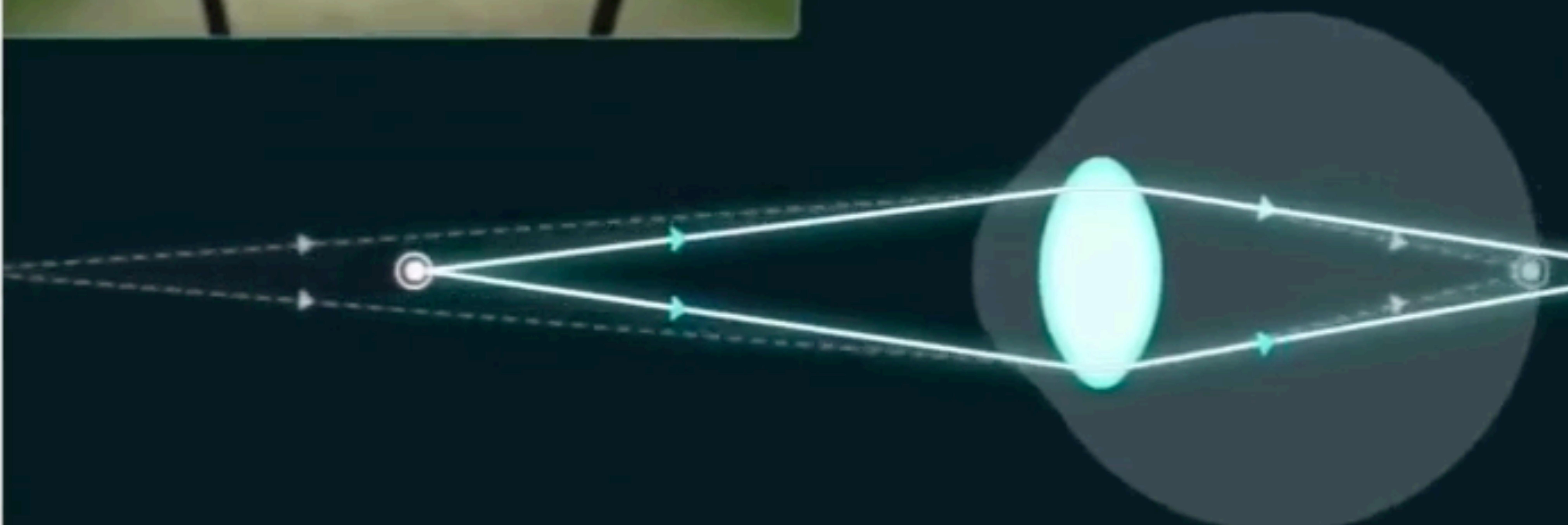








HUMAN EYE

RAY-DIAGRAM














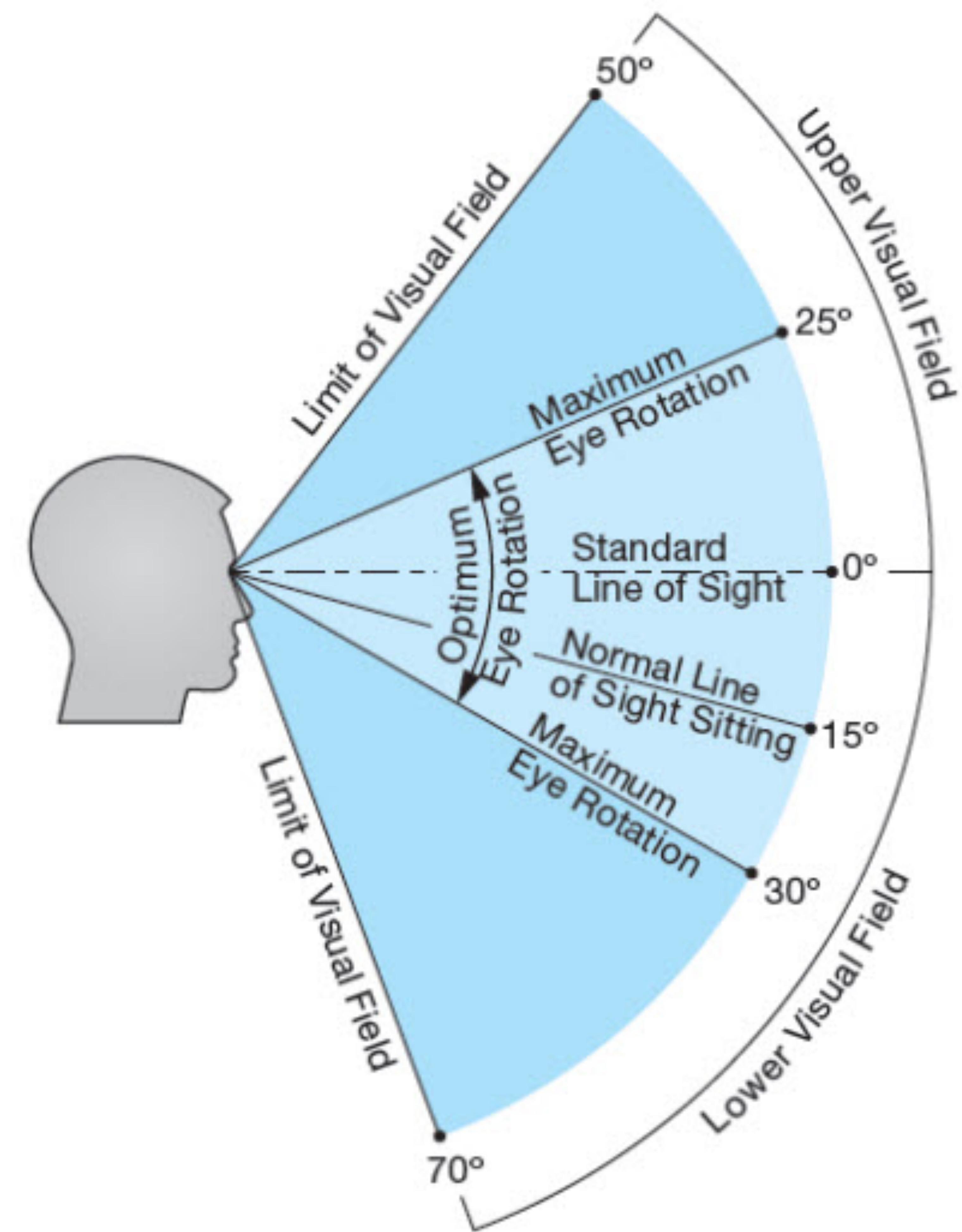
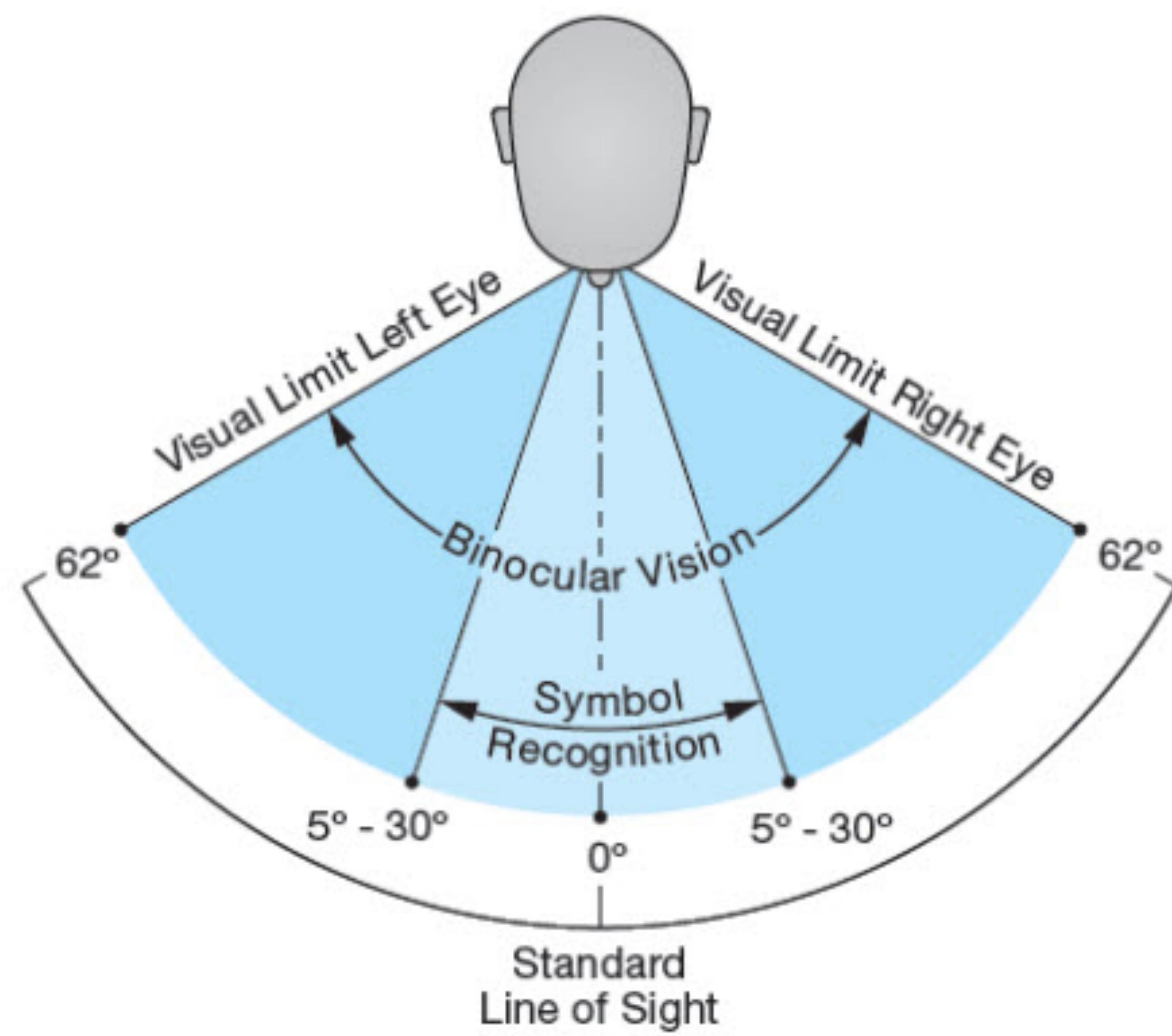


A photograph of a person sitting in the driver's seat of a car, looking forward. The background is severely distorted, showing multiple warped and colored versions of the interior and exterior environment. A large, semi-transparent black rectangular box covers the center of the image, containing the word "Distortion" in a large, white, serif font.

Distortion

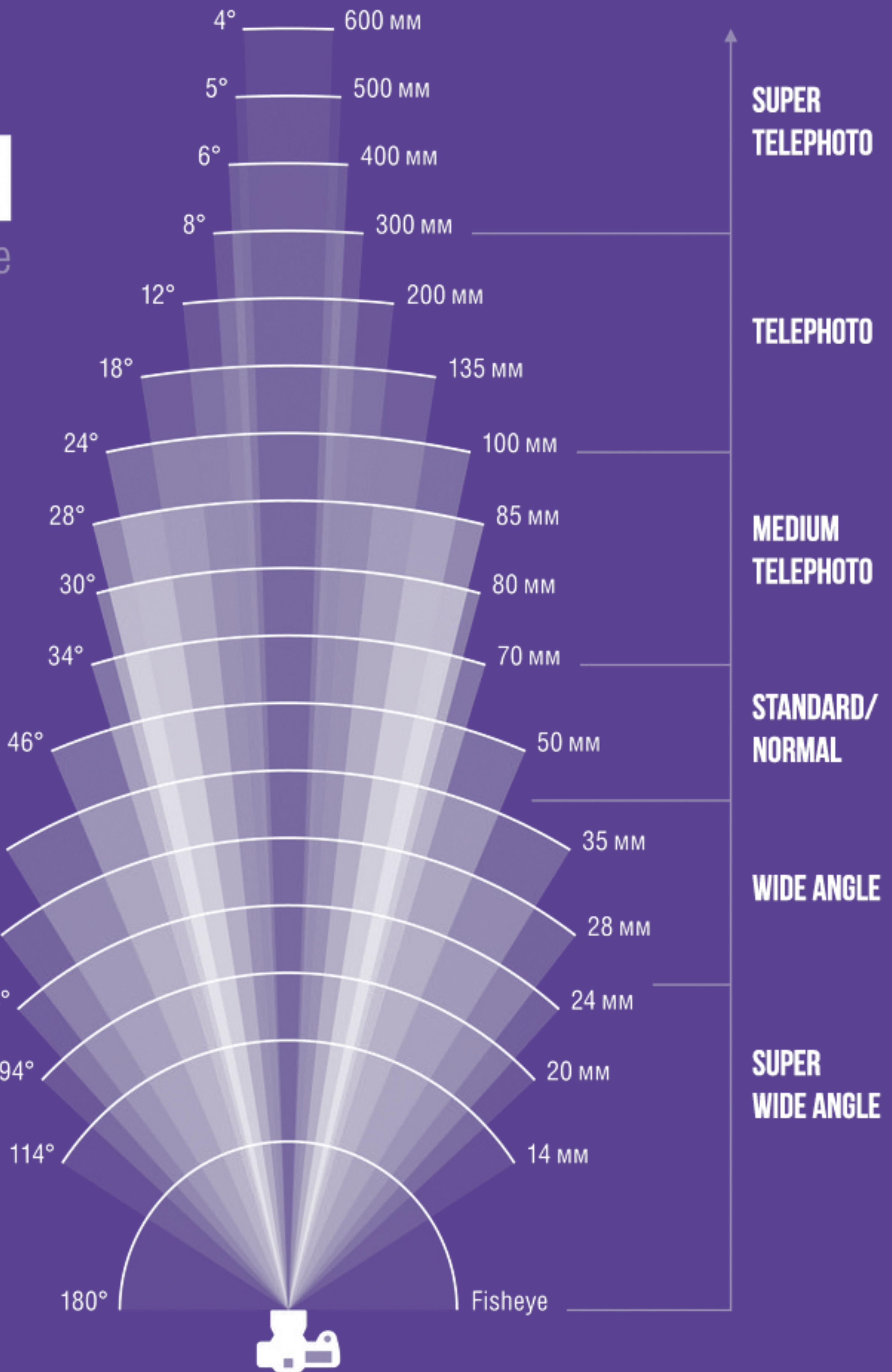






FOCAL LENGTH

& angle of view guide





Bokeh Level 7



Bokeh Level 1





Bokeh Level 1



Bokeh Level 1









Motion Blur



<https://www.youtube.com/watch?v=yr3ngmRuGUc>

A person's profile is shown from the side, facing right. The brain area is highlighted with a vibrant green and yellow glow, suggesting neural activity or color perception. From the top of the head, several thin, blue and white wavy lines extend upwards and outwards, resembling light rays or energy waves.

Color

Photorealistic

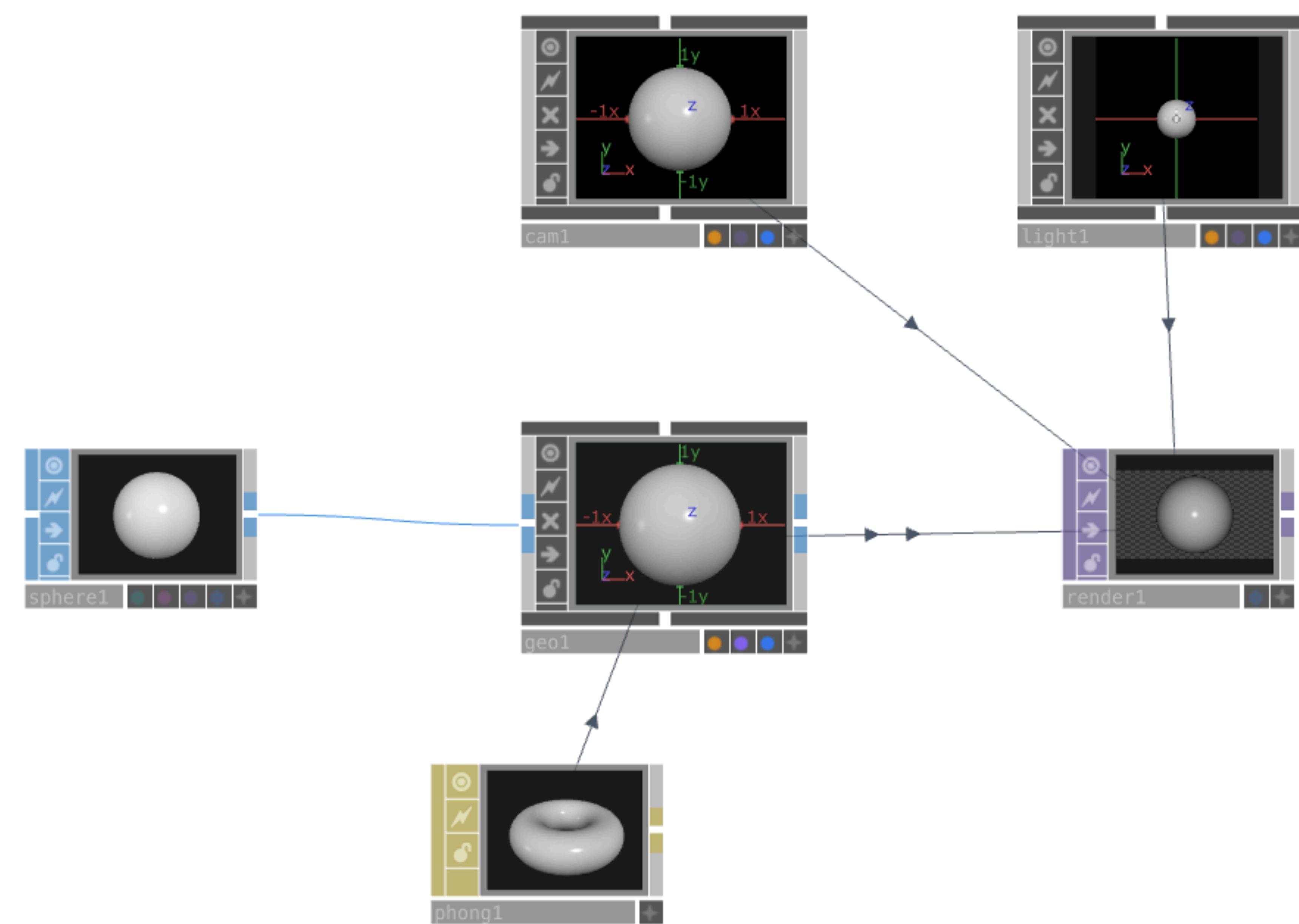


Non-photorealistic

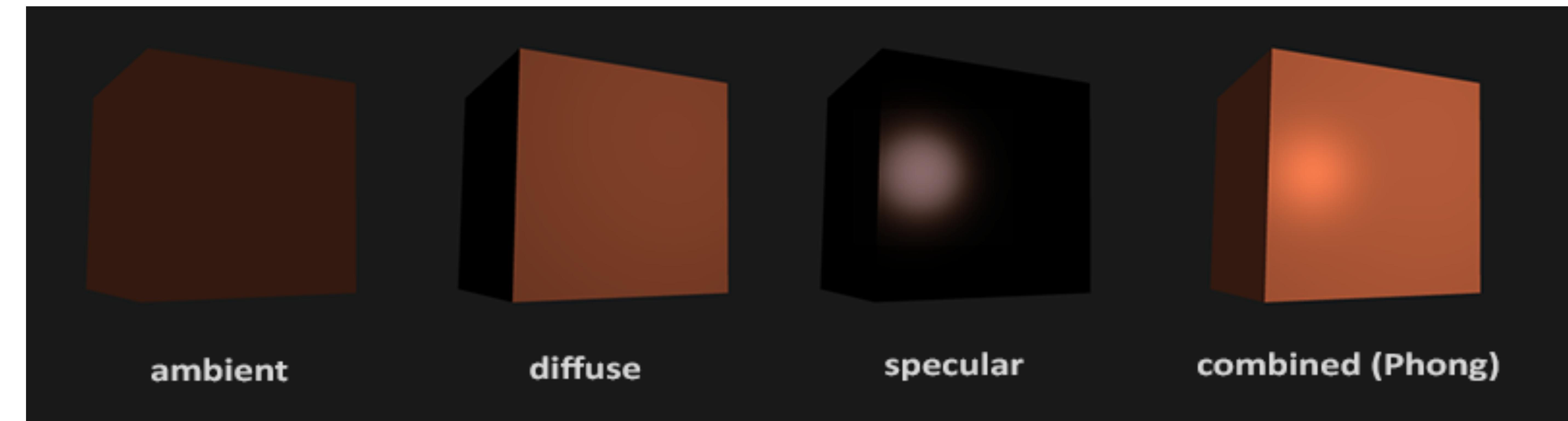


https://www.youtube.com/watch?v=l-wUKu_V2Lk

Phong



Bùi Tường Phong



PBR(Physically Based Rendering)

