

Simple Light Sources

CSE 681

Types

Directional

- All light rays have the same direction
- Simulates parallel rays of sun

Point Light Source

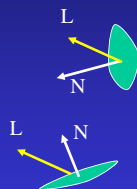
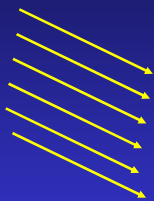
- Light originates from specific point in world space
- Light ray has to be formed from object point to light source point

Spotlight

- Point light source with direction of greatest intensity
- Optionally has hood outside of which no light is emitted

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Directional

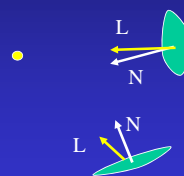


$$N_i \cdot L$$

Where L is constant for all objects in scene

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Point Light Source



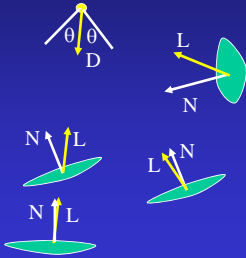
$$N_i \cdot L_i$$

L is formed for each illuminated point or face or object

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Spotlight (Warn model)

Intensity of light falls off according to deviation from D



$$I_i = -D \cdot L_i$$

Clamp to zero

Diffuse: $I_i(N_i \cdot L_i)$

Hood (optional)
If $\cos(\theta) > -L_i \cdot D$
Ignore light

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