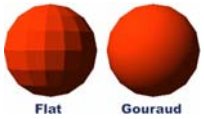
Problems with Interpolated Shading

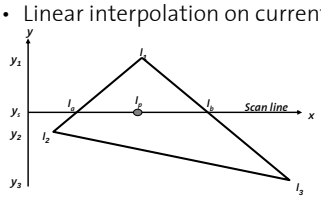
- Polygonal Silhouettes



→ subdivision

Problems with Interpolated Shading

- Linear interpolation on current scan line



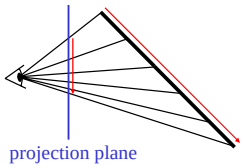
$$I_a = I_1-(I_1-I_2)\ \frac{(y_1-y_s)}{(y_1-y_2)}$$

$$I_b = I_1-(I_1-I_3)\ \frac{(y_1-y_s)}{(y_1-y_3)}$$

$$I_p = I_b-(I_b-I_a)\ \frac{(x_b-x_p)}{(x_b-x_a)}$$

Problems with Interpolated Shading

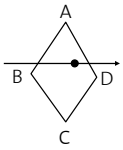
- Perspective Distortion



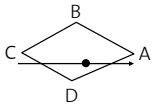
→ subdivision
→ perspective interpolation

Problems with Interpolated Shading

- Orientation Dependence



Interpolate between AB and AD

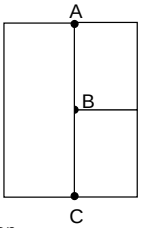


Interpolate between CD and AD

→ triangles

Problems with Interpolated Shading

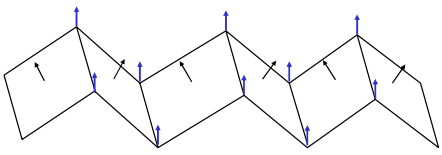
- Shared Vertices



→ tesselation

Problems with Interpolated Shading

- Unrepresentative vertex normals



→ subdivision