

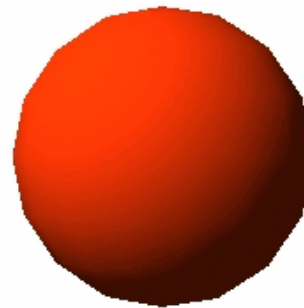


Problems with Interpolated Shading

- Polygonal Silhouettes



Flat



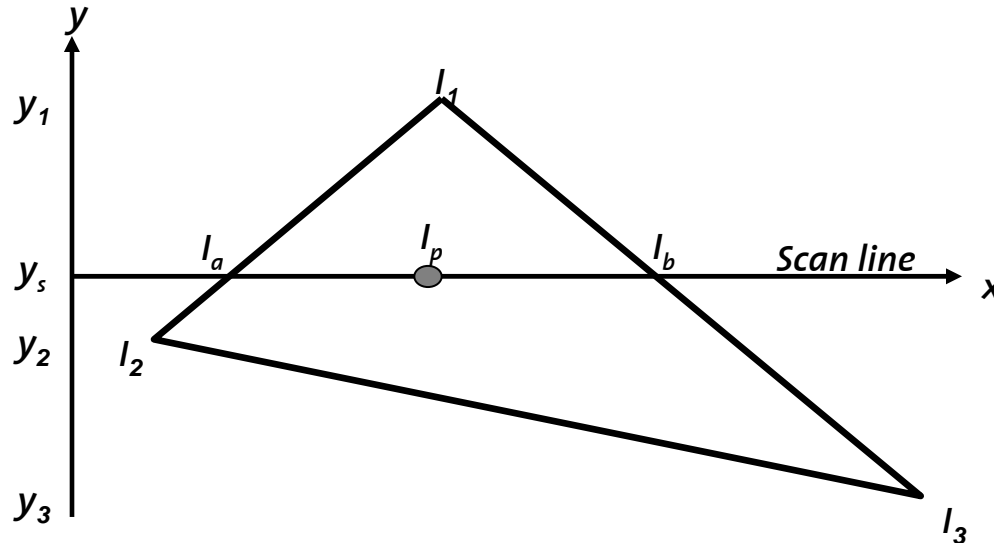
Gouraud

→ subdivision



Problems with Interpolated Shading

- Linear interpolation on current scan line



$$l_a = l_1 - (l_1 - l_2) \frac{(y_1 - y_s)}{(y_1 - y_2)}$$

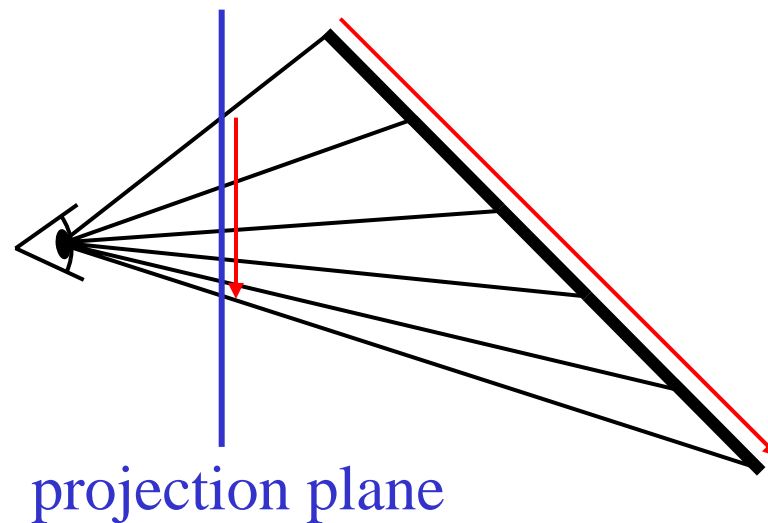
$$l_b = l_1 - (l_1 - l_3) \frac{(y_1 - y_s)}{(y_1 - y_3)}$$

$$l_p = l_b - (l_b - l_a) \frac{(x_b - x_p)}{(x_b - x_a)}$$



Problems with Interpolated Shading

- Perspective Distortion

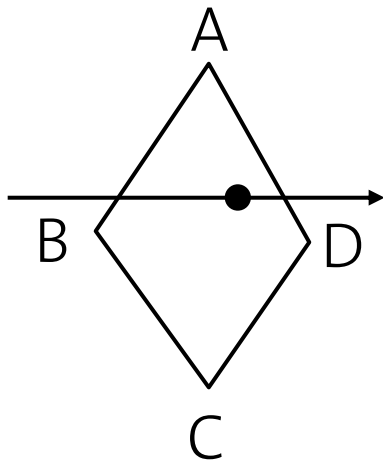


- subdivision
- perspective interpolation

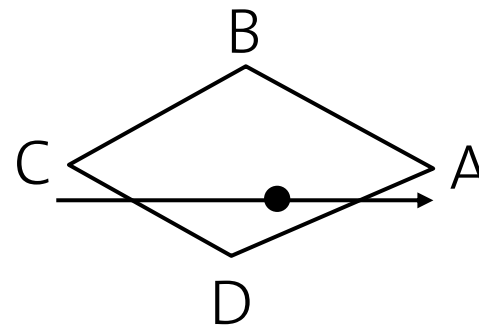


Problems with Interpolated Shading

- Orientation Dependence



*Interpolate between
AB and AD*



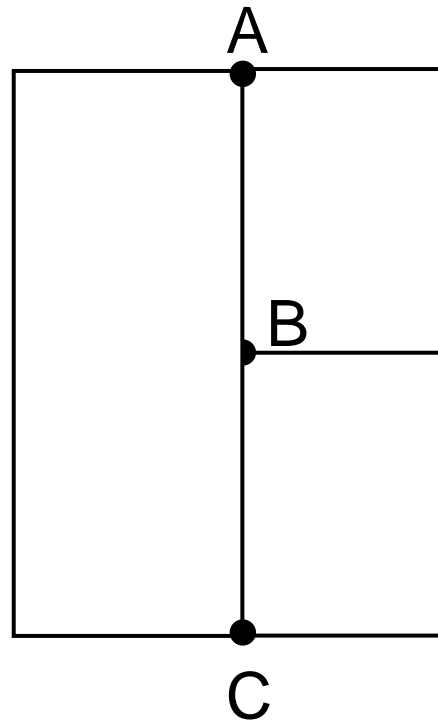
*Interpolate between
CD and AD*

→ triangles



Problems with Interpolated Shading

- Shared Vertices

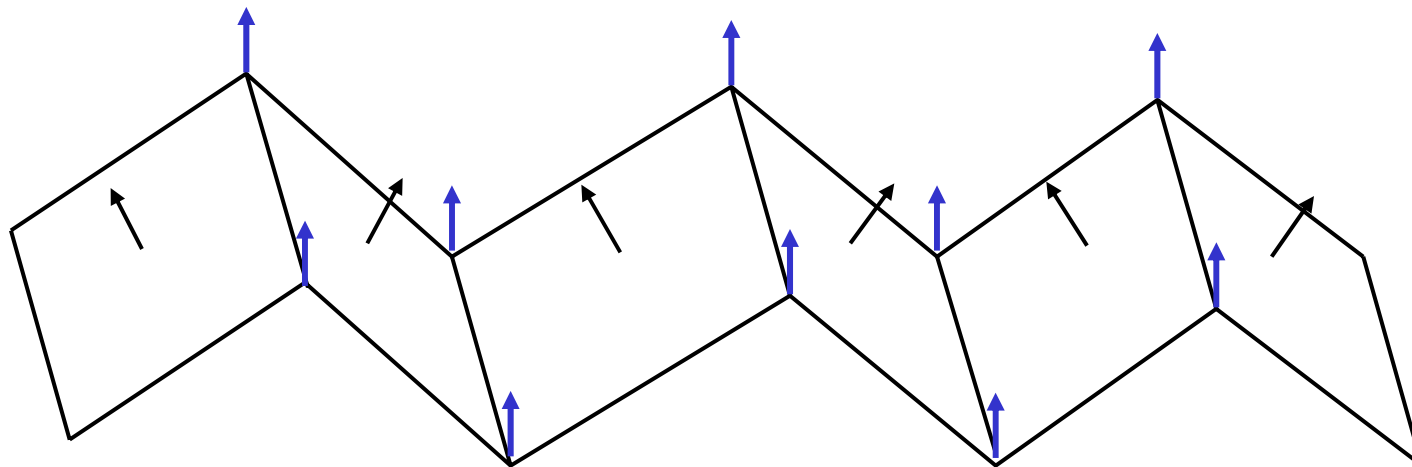


→ tessellation



Problems with Interpolated Shading

- Unrepresentative vertex normals



→ subdivision