

NAME

glPolygonMode – select a polygon rasterization mode

C SPECIFICATION

```
void glPolygonMode( GLenum face,
                  GLenum mode )
```

PARAMETERS

face Specifies the polygons that *mode* applies to. Must be **GL_FRONT** for front-facing polygons, **GL_BACK** for back-facing polygons, or **GL_FRONT_AND_BACK** for front- and back-facing polygons.

mode

Specifies how polygons will be rasterized. Accepted values are **GL_POINT**, **GL_LINE**, and **GL_FILL**. The initial value is **GL_FILL** for both front- and back-facing polygons.

DESCRIPTION

glPolygonMode controls the interpretation of polygons for rasterization. *face* describes which polygons *mode* applies to: front-facing polygons (**GL_FRONT**), back-facing polygons (**GL_BACK**), or both (**GL_FRONT_AND_BACK**). The polygon mode affects only the final rasterization of polygons. In particular, a polygon's vertices are lit and the polygon is clipped and possibly culled before these modes are applied.

Three modes are defined and can be specified in *mode*:

GL_POINT Polygon vertices that are marked as the start of a boundary edge are drawn as points. Point attributes such as **GL_POINT_SIZE** and **GL_POINT_SMOOTH** control the rasterization of the points. Polygon rasterization attributes other than **GL_POLYGON_MODE** have no effect.

GL_LINE Boundary edges of the polygon are drawn as line segments. They are treated as connected line segments for line stippling; the line stipple counter and pattern are not reset between segments (see **glLineStipple**). Line attributes such as **GL_LINE_WIDTH** and **GL_LINE_SMOOTH** control the rasterization of the lines. Polygon rasterization attributes other than **GL_POLYGON_MODE** have no effect.

GL_FILL The interior of the polygon is filled. Polygon attributes such as **GL_POLYGON_STIPPLE** and **GL_POLYGON_SMOOTH** control the rasterization of the polygon.

EXAMPLES

To draw a surface with filled back-facing polygons and outlined front-facing polygons, call **glPolygonMode(GL_BACK, GL_FILL);**

NOTES

Vertices are marked as boundary or nonboundary with an edge flag. Edge flags are generated internally by the GL when it decomposes polygons; they can be set explicitly using **glEdgeFlag**.

ERRORS

GL_INVALID_ENUM is generated if either *face* or *mode* is not an accepted value.

GL_INVALID_OPERATION is generated if **glPolygonMode** is executed between the execution of **glBegin** and the corresponding execution of **glEnd**.

ASSOCIATED GETS

glGet with argument **GL_POLYGON_MODE**

SEE ALSO

glBegin, **glEdgeFlag**, **glLineStipple**, **glLineWidth**, **glPointSize**, **glPolygonStipple**