NAME

XGL_LPAT_DATA – specifies the line segments, stored in an array, that comprise a Line Pattern

SYNOPSIS

#include <xgl/xgl.h>

Xgl_lpat lpat;

xgl_object_set(lpat, XGL_LPAT_DATA, Xgl_sgn32 | float [], 0);
xgl_object_get(lpat, XGL_LPAT_DATA, Xgl_sgn32 | float*);

DESCRIPTION

This attribute defines the on and off segment lengths of a Line Pattern, which are stored as an array. The attribute is used with the operator **xgl_object_create**(3) to create a Line Pattern object. Once created, the application can attach it to the current Context by using one or both Context attributes, **XGL_CTX_LINE_PATTERN**(3) and **XGL_CTX_EDGE_PATTERN**(3). Then, the pattern will be used if **XGL_CTX_LINE_STYLE**(3) or **XGL_CTX_EDGE_STYLE**(3) is set to patterned lines.

The on and off line segment data is an array of positive, non-zero, 32-bit integers or floating point numbers. The data type used is specified by the Line Pattern attribute **XGL_LPAT_DATA_TYPE**(3). It should be set before passing the data.

The length of the line segment data array is set with the Line Pattern attribute **XGL_LPAT_DATA_SIZE**(3). It should also be set before passing the data.

The line segment data array stores line segment lengths of alternating *on* and *off* pattern segments. The first segment is assumed to be an *on* segment. The lengths are specified in the coordinate system defined by the Line Pattern attribute **XGL_LPAT_COORD_SYS**(3).

The segments are used cyclically; when the end of the pattern is reached (that is, when the end of the array is reached), the pattern is started over from the beginning. For patterns containing an even number of segments, the cyclical replication occurs in a straightforward manner. A pattern such as 1 (*on*), 3 (*off*), 10 (*on*), 5 (*off*) repeats as 1 (*on*), 3 (*off*), 10 (*on*), 5 (*off*), 1 (*on*), 3 (*off*), 10 (*on*), 5 (*off*), and so on. For an odd number of segments, however, the pattern is first concatenated with itself to produce a list of even length. This list is then used as the data array. For example, a pattern such as 1 (*on*), 3 (*off*), 10 (*on*) becomes 1 (*on*), 3 (*off*), 10 (*on*), 1 (*off*), 3 (*on*), 10 (*off*), which repeats as 1 (*on*), 3 (*off*), 10 (*on*), 1 (*off*), 3 (*on*), 10 (*off*), 1 (*on*), 3 (*off*), 10 (*on*), 1 (*off*), 3 (*on*), 10 (*off*), and so on.

The attribute **XGL_LPAT_OFFSET**(3) defines an offset into the Line Pattern where the pattern will begin. Its data type is always *float*.

When using xgl_object_get to get the Line Pattern data, the application must pass a pointer to an array large enough to hold the XGL_LPAT_DATA_SIZE number of data items.

No default value is defined.

SEE ALSO

xgl_object_set(3)
xgl_object_get(3)
xgl_object_create(3)
XGL_CTX_EDGE_PATTERN(3)
XGL_CTX_LINE_PATTERN(3)
XGL_CTX_EDGE_STYLE(3)
XGL_CTX_LINE_STYLE(3)
XGL_LPAT_COORD_SYS(3)
XGL_LPAT_DATA_SIZE(3)
XGL_LPAT_DATA_TYPE(3)
XGL_LPAT_OFFSET(3)
XGL_LPAT_STYLE(3)