NAME

PEXFillAreaWithData - 3D Fill Area Primitive With Additional Data

SYNTAX

void PEXFillAreaWithData(Display **display*, XID *resource_id*, PEXOCRequestType *req_type*, int *shape_hint*, int *ignore_edges*, unsigned int *facet_attributes*, unsigned int *vertex_attributes*, int *color_type*, PEXFacetData **facet_data*, unsigned int *count*, PEXArrayOfVertex *vertices*)

PARAMETERS

display	A pointer to a display structure returned by a successful **XOpenDisplay** call.
resource_id	The resource identifier of the renderer or structure.
req_type	The request type for the output command (**PEXOCRender, PEXOCStore, PEXOCRenderSingle** or **PEXOCStoreSingle**).
shape_hint	The shape of the fill area (**PEXShapeComplex, PEXShapeNonConvex, PEXShapeConvex, PEXShapeUnknown**).
ignore_edges	A flag that determines if surface edges are rendered (**True** or **False**).
facet_attributes	A mask indicating the facet attributes provided (**PEXGANone, PEXGAColor, PEXGANormal**).
vertex_attributes	A mask indicating the vertex attributes provided (**PEXGANone, PEXGAColor, PEXGANormal**).
color_type	The type of color data provided (**PEXColorTypeIndexed, PEXColorTypeRGB, PEXColorTypeCIE, PEXColorTypeHSV, PEXColorTypeHLS, PEXColorTypeRGB8, PEXColorTypeRGB16**).
facet_data	A pointer to facet data.
count	The number of vertices.
vertices	An array of vertices defining the fill area.

RETURNS

None

DESCRIPTION

This function creates a fill area output primitive.

This function is like **PEXFillArea**(3) except that it allows additional information to be specified for the fill area and for each vertex. Color values passed must be of the specified color type.

The facet attributes indicate the content of the facet data. This data may be a color, a normal, or a color followed by a normal. Use the constants **PEXGANone, PEXGAColor** and **PEXGANormal** to construct a mask indicating the data provided. If specified, the facet color takes precedence over the surface color. If specified, the facet normal is used to determine whether the fill area is back-facing.

The vertex attributes indicate the content of each fill area vertex. In addition to the coordinate (x,y,z), applications may specify a color, a normal, or a color followed by a normal for each vertex. Use the constants **PEXGANone, PEXGAColor** and **PEXGANormal** to construct a mask indicating the data provided. If specified, vertex colors will override

facet color or the current surface color. If specified, vertex normals are taken to be normals at the vertices of the fill area.

The reflection model and the surface interpolation will affect how the additional data is used in rendering the surface.

Normals are assumed to be unit length vectors. The effect if the normal is not unit length is implementation-dependent.

All other aspects of this primitive are the same as **PEXFillArea**(3)**.**

DATA STRUCTURES

See **PEXlib.h.**

ERRORS

BadPEXOutputCommand
The output command contains an invalid value.

BadPEXRenderer
The specified renderer resource identifier is invalid.

BadPEXStructure
The specified structure resource identifier is invalid.

SEE ALSO

PEXSetInteriorStyle(3)
PEXSetInteriorStyleIndex(3)
PEXSetSurfaceColorIndex(3)
PEXSetSurfaceColor(3)
PEXSetReflectionAttributes(3)
PEXSetReflectionModel(3)
PEXSetSurfaceInterpMethod(3)
PEXSetBFInteriorStyle(3)
PEXSetBFInteriorStyleIndex(3)
PEXSetBFSurfaceColorIndex(3)
PEXSetBFSurfaceColor(3)
PEXSetBFReflectionAttributes(3)
PEXSetBFReflectionModel(3)
PEXSetBFSurfaceInterpMethod(3)
PEXSetFacetCullingMode(3)
PEXSetFacetDistinguishFlag(3)
PEXSetPatternSize(3)
PEXSetPatternAttributes(3)
PEXSetPatternAttributes2D(3)
PEXSetInteriorBundleIndex(3)
PEXSetSurfaceEdgeFlag(3)
PEXSetSurfaceEdgeType(3)
PEXSetSurfaceEdgeWidth(3)
PEXSetSurfaceEdgeColor(3)
PEXSetSurfaceEdgeColorIndex(3)
PEXSetEdgeBundleIndex(3)