NAME

XGL_PCACHE – a Primitive Cache (Pcache) object

OVERVIEW

XGL_PCACHE is a *type* parameter value for an XGL Primitive Cache object.

A Primitive Cache (Pcache) is an XGL object that stores a sequence of zero or more XGL primitives and/or attribute settings. A Pcache can be rendered with greater speed, in general, than its individual components can. Pcache contents are stored in a device dependent format in order to maximize display speed.

A Pcache must be bound to an XGL context and its device in order to be used. At creation time, a Pcache is not bound to any context. The application must do this by setting the **XGL_PCACHE_CONTEXT**(3) attribute in the Pcache.

Once a pcache is created and bound (to a context and its device), it may be used in place of the context object for the following XGL operators and attributes:

xgl_multimarker(3)
xgl_multipolyline(3)
xgl_stroke_text(3)
xgl_multi_simple_polygon(3)
xgl_triangle_list(3)
xgl_quadrilateral_mesh(3)
xgl_object_set(3)
XGL_CTX_LINE_COLOR(3)
XGL_CTX_LINE_STYLE(3)
XGL_CTX_LINE_WIDTH_SCALE_FACTOR(3)
XGL_CTX_LINE_COLOR_SELECTOR(3)
XGL_CTX_MARKER_COLOR_SELECTOR(3)
XGL_CTX_SURF_FACE_CULL(3)
XGL_CTX_SURF_FRONT_COLOR(3)
XGL_CTX_SURF_FRONT_COLOR_SELECTOR(3)
XGL_3D_CTX_SURF_FRONT_ILLUMINATION(3)
XGL_3D_CTX_SURF_BACK_COLOR(3)
XGL_3D_CTX_SURF_BACK_COLOR_SELECTOR(3)
XGL_3D_CTX_SURF_BACK_ILLUMINATION(3)
XGL_3D_CTX_SURF_GEOM_NORMAL(3)
XGL_CTX_PICK_ID_1(3)
XGL_CTX_PICK_ID_2(3)

When these operators are applied to a Pcache, they (the operators) are recorded in a device specific format for display at a later time with **xgl_pcache_display**(3)**.** After **xgl_pcache_display**(3) is called, the pcache is *closed*, and the operators listed above may no longer be applied.

An application can empty (and re-open) a Pcache by applying the operator **xgl_context_new_frame**(3)**.** A Pcache is also emptied whenever it is associated with another context or its context is associated with another device. It is an error to use the Pcache (except to destroy or re-associate it) if either its context or device has been destroyed.

When a Pcache is built, it may make assumptions about the state of the context to which it is attached. At display time, the application may test these assumptions to verify that they are still valid. If so, the Pcache is rendered. If not, the application is informed that the Pcache needs to be rebuilt.

The contents of the Pcache may be picked.

A brief overview of all of the attributes follows. For more information, see the man page for each attribute.

XGL_OBJ_APPLICATION_DATA(3)
: This attribute allows the application program to store its own data with an object.

XGL_OBJ_SYS_STATE(3)
: This read-only attribute returns the System State that was used to create the object.

XGL_OBJ_TYPE(3)
: This read-only attribute defines the type of an XGL object.

XGL_PCACHE_CONTEXT(3)
: This attribute defines the XGL Context object associated with the Primitive Cache pcache.