NAME

XGL_CMAP_NAME – permits the application to use color maps that have been created using window system function calls

SYNOPSIS

#include <xgl/xgl.h>

Xgl_cmap cmap;

xgl_object_set(cmap, XGL_CMAP_NAME, Colormap, 0);
xgl_object_get(cmap, XGL_CMAP_NAME, Colormap *);

DESCRIPTION

The application can use the OpenWindows and X window systems to create a color map that will be used to map colors from the XGL application's color space to the hardware's color space. Note that here the term *color map* refers to the window-system-produced color map and should not be confused with the XGL Color Map object. This attribute, **XGL_CMAP_NAME**(3)**,** is the name given to the color map by the window system. The name can then be passed to XGL so that XGL can share the use of the color map with the window system. To do this, an application should do the following:

1. Create a color map solely through calls to window system functions. (In OpenWindows and X, the application uses the *XCreateColormap* function call.)
2. Get the *color map name* from the window system. (In OpenWindows and X, this is the *XID* returned by the *XCreateColormap* function call.)
3. Get the *pixel mapping array* returned by the window system after it creates the color map (see **XGL_WIN_RAS_PIXEL_MAPPING**(3)).
4. Set the XGL attribute XGL_CMAP_NAME to the window system color map name.
5. If the **XGL_DEV_COLOR_TYPE**(3) attribute is XGL_COLOR_INDEX, set the size of the color table with **XGL_CMAP_COLOR_TABLE_SIZE**(3)**.** If the **XGL_DEV_-COLOR_TYPE**(3) attribute is XGL_COLOR_RGB, set the size of the color cube with **XGL_CMAP_COLOR_CUBE_SIZE**(3)**.**
6. Set XGL_WIN_RAS_PIXEL_MAPPING to the window system pixel mapping array.

It is the responsibility of the application to make sure that the RGB values in the window system color map are correct. When using a window-system-generated color map, the application cannot inquire about the contents of it (by using **xgl_object_get**(3) on the Color Map object's color table). Instead, the application should manipulate the color map through window system calls.

If XGL creates the color map (such as the default Color Map object that is created when a new Window Raster is created), XGL_CMAP_NAME reflects an internal X color map used by XGL and the window system. In other words, in this case XGL implicitly calls the window system functions that create the color map and attaches this window-system-created color map to the Raster.

The default value is NULL. However, if XGL_CMAP_NAME has not been set, it will be set to the X colormap of the first window raster to which it is associated.

SEE ALSO

xgl_object_set(3)
xgl_object_get(3)
xgl_object_create(3)
XGL_CTX_BACKGROUND_COLOR(3)
XGL_WIN_RAS_PIXEL_MAPPING(3)

NOTES

If the application sets the XGL_CMAP_NAME attribute, the XGL_WIN_RAS_PIXEL_MAPPING attribute must also be set. This guarantees that the application's indexed colors are properly mapped to the hardware indices.

Non-contiguous pixel mapping, when used with XGL primitives requiring interpolated colors, produces undefined results on various graphics hardware and may degrade rendering performance. To ensure correct results for interpolated color rendering, the application should use a *contiguous* pixel mapping. (For a definition of *contiguous pixel mapping*, see **XGL_WIN_RAS_PIXEL_MAPPING**(3).)