QUALCOMM®

Binary Runtime Environment for Wireless™

OpenGL® ES Demo 03 Application

brew™

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Introduction

The ogles_demo_03 application is a demonstration of a BREW® application that utilizes the standard OpenGL® ES and EGL graphics APIs. The sample application is a skybox that provides a 360° view of a mountain scene.

Note: The intended target device for this sample application is any BREW device supporting OpenGL ES that has a device screen with at least 16 bits color depth. If you run this application on the Emulator, select a device image that has at least 16 bits for color depth.

ogles_demo_03 specifications

The following table lists the interfaces and controls used in the development of ogles_demo_03 and the set of files you will need to run the application on a handset.

ogles_demo_03 specifications

Interfaces used	Controls used	Files needed on handset
IBitmap	None	ogles_demo_03.bar
IDisplay		ogles_demo_03.mif
IEGL		ogles_demo_03.mod
IFile		ogles_demo_03.sig
IFileMgr		skybox_back.ppm
IGL		skybox_bottom.ppm
IShell		skybox_front.ppm
		skybox_left.ppm
		skybox_right.ppm
		skybox_top.ppm

Revision history

The revision history for this document is shown in the following table.

Revision history

Version	Date	Description
A	Aug 2004	Initial release

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Running ogles_demo_03 on the BREW SDK™

Before exploring the underlying code that makes ogles_demo_03 work, take a look at the application from the user's perspective; i.e., how it works on a handset.

To run ogles_demo_03

1. Run the BREW Emulator and ensure that the MIF Directory setting is pointing to <BREW\Examples>.
2. Choose the ogles_demo_03 application.

   BREW loads the ogles_demo_03 applet DLL and starts the application. A splash screen, similar to the following, appears.

Splash screen

After the splash screen appears, a spinning skybox option screen, similar to the following, opens in auto-spin mode.

Skybox option screen

3. In the application, you can press keys to perform the functions listed in the following table.

Skybox option functions

Press this key	To do this
Left arrow	Rotate the skybox to the left; if in auto-spin mode, exit auto-spin mode
Right arrow	Rotate the skybox to the right; if in auto-spin mode, exit auto-spin mode
Up arrow	Look toward the top of the skybox
Down arrow	Look toward the bottom of the skybox
Enter	Resume auto-spin mode
1	Zoom in
2	Zoom out

4. To stop the applet at any time, press **End**.

What ogles_demo_03 demonstrates

The ogles_demo_03 application demonstrates how to create a BREW application that utilizes the standard OpenGL ES and EGL graphics APIs. The application is a skybox constructed as a bounding volume cube. Using a set of seamless textures on each side of the cube produces a 360° globe effect. This application:

- Illustrates the basic OpenGL ES and EGL graphics APIs and functions, including initializing the graphics API, the viewing area, and cleaning up the API
- Shows how to use an image as texture; provides a set of functions to support the PPM image format
- Uses the IBitmap, IDisplay and IShell interfaces, IEGL and IGL for the graphics APIs, as well as IFile and IFileMgr for the file handling
- Demonstrates basic fixed-point math calculation such as addition, subtraction, multiplication, and division; also shows the conversion between floating-point numbers and 16-bit precision fixed-point numbers