

Document Revision History

This table describes the changes to *OpenGL ES Programming Guide*.

Date	Notes
2018-06-04	Moved to Retired Documents Library.
2017-03-27	Removed many of the tables from appendix D, as the values in these tables were not correct for newer GPUs. The best way to retrieve useful information about a particular GPU's capabilities, limits, and extensions is to query OpenGL ES directly.
2016-09-13	Added "OpenGL ES 3.0 for Apple A7 GPUs and Later" appendix.
2015-12-08	Removed unnecessary "glEnable()" line in Listing 9-1
2015-09-16	Updated the texturetool listings to reference ASTC textures and the KTX format.
2014-07-15	Improved discussions of rendering steps and memory management.
2014-03-10	Added and expanded discussions of OpenGL ES 3.0 and important extensions, new multithreading support in iOS 7.1, Xcode OpenGL ES tools, GPU architecture and performance issues.
2013-09-18	Updated to include more information about OpenGL ES 3.0, GLKit, and the Xcode debugger.
2013-04-23	Moved the platform notes to OpenGL ES Hardware Platform Guide for iOS.
	Removed the "Platform Notes" chapter and moved the information into its own book, <i>OpenGL ES Hardware Platform Guide for iOS</i> .
2011-02-24	Added information about new OpenGL ES tools provided in Xcode 4. Clarified that context sharing can only be used when all of the contexts share the same version of the OpenGL ES API.
2010-11-15	Significantly revised and expanded all the material in the document.
	Added a glossary of commonly used graphics and OpenGL ES terminology.
	Added a detailed explanation of the rendering loop, including enhancements added in iOS 4 (renderbuffer discards).
2010-09-01	Fixed an incorrect link. Clarified some performance guidelines. Added links to more new extensions added in iOS 4.
2010-07-09	Changed the title from "OpenGL ES Programming Guide for iPhone OS."
2010-06-14	Added new extensions exposed by iOS 4.
2010-01-20	Corrected code for creating a framebuffer object that draws to the

	screen.
2009-11-17	Minor updates and edits.
2009-09-02	Edited for clarity. Updated extensions list to reflect what's currently available. Clarified usage of triangle strips for best vertex performance. Added a note to the platforms chapter about texture performance on the PowerVR SGX.
2009-06-11	First version of a document that describes how to use the OpenGL ES 1.1 and 2.0 programming interfaces to create high performance graphics within an iPhone Application.