OpenGL® ES™ 3.0 Programming Guide

Second Edition

Dan Ginsburg ▪ Budirijanto Purnomo

With Earlier Contributions from Dave Shreiner and Aaftab Munshi

Foreword by Neil Trevett, President, Khronos Group

Praise for *OpenGL® ES™ 3.0 Programming Guide, Second Edition*

"As a graphics technologist and intense OpenGL ES developer, I can honestly say that if you buy only one book on OpenGL ES 3.0 programming, then this should be the book. Dan and Budirijanto have written a book clearly by programmers for programmers. It is simply required reading for anyone interested in OpenGL ES 3.0. It is informative, well organized, and comprehensive, but best of all practical. You will find yourself reaching for this book over and over again instead of the actual OpenGL ES specification during your programming sessions. I give it my highest recommendation."

—Rick Tewell, Graphics Technology Architect, Freescale

"This book provides outstanding coverage of the latest version of OpenGL ES, with clear, comprehensive explanations and extensive examples. It belongs on the desk of anyone developing mobile applications."

—Dave Astle, Graphics Tools Lead, Qualcomm Technologies, Inc., and Founder, GameDev.net

"The second edition of *OpenGL® ES™ 3.0 Programming Guide* provides a solid introduction to OpenGL ES 3.0 specifications, along with a wealth of practical information and examples to help any level of developer begin programming immediately. We'd recommend this guide as a primer on OpenGL ES 3.0 to any of the thousands of developers creating apps for the many mobile and embedded products using our PowerVR Rogue graphics."

—Kristof Beets, Business Development, Imagination Technologies

"This is a solid OpenGL ES 3.0 reference book. It covers all aspects of the API and will help any developer get familiar with and understand the API, including specifically the new ES 3.0 functionality."

—Jed Fisher, Managing Partner, 4D Pipeline

"This is a clear and thorough reference for OpenGL ES 3.0, and an excellent presentation of the concepts present in all modern OpenGL programming. This is the guide I'd want by my side when diving into embedded OpenGL."

—Todd Furlong, President & Principal Engineer, Inv3rsion LLC

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The OpenGL graphics system is a software interface to graphics hardware. ("GL" stands for "Graphics Library".) It allows you to create interactive programs that produce color images of moving, three-dimensional objects. With OpenGL, you can control computer-graphics technology to produce realistic pictures, or ones that depart from reality in imaginative ways.

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