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COURSE NOTES

11

Programming with OpenGL: Advanced Techniques

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Abstract

This course moves beyond the straightforward images generated by the novice, demonstrating the more sophisticated and novel techniques possible using the OpenGL library.

By explaining the concepts and demonstrating the techniques required to generate images of greater realism and utility, the course helps students achieve two goals: they gain a deeper insight into OpenGL functionality and computer graphics concepts, while expanding their "toolbox" of useful OpenGL techniques.

Speakers

David Blythe

David Blythe is a Principal Engineer with the Advanced Systems Division at Silicon Graphics. David joined SGI in 1991 and has contributed to the development of RealityEngine and InfiniteReality graphics. He has contributed extensively to implementations of the OpenGL graphics library and OpenGL extension specifications.

Prior to joining SGI, David was a visualization scientist at the Ontario Centre for Large Scale Computation. David received both a B.S. and M.S. degree in computer science from the University of Toronto.
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Celeste Fowler

Celeste Fowler is a software engineer in the Advanced Systems Division at Silicon Graphics. She worked on the OpenGL imaging pipeline for the InfiniteReality graphics system and on the OpenGL display list implementation for InfiniteReality and RealityEngine.

Before coming to SGI, Celeste attended Princeton University where she did research on radiosity techniques and TA'd courses in computer graphics and programming systems.
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Brad Grantham

Brad Grantham currently contributes to the design and implementation of Silicon Graphics' high-level graphics toolkits, including OpenGL++, a scene graph toolkit for OpenGL. Brad previously worked on the Windows 95 port and Java bindings for Cosmo 3D and, before that, worked in the IRIS Performer group.

Before joining SGI, Brad wrote UNIX kernel code and imaging codecs. He received a B.S. from Virginia Tech in 1992, and his previous claim to fame is MacBSD, BSD UNIX for the Macintosh.
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Simon Hui

Simon Hui is a software engineer at 3Dfx Interactive, Inc. He currently works on OpenGL and other graphics libraries for PC and consumer platforms.

Prior to joining 3Dfx, Simon worked on IRIS Performer, a realtime graphics

toolkit, in the Advanced Systems Division at Silicon Graphics. He has also worked on OpenGL implementations for the RealityEngine and InfiniteReality. Simon received a B.A. in Computer Science from the University of California at Berkeley.
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Tom McReynolds

Tom McReynolds is a software engineer in the Core Rendering group at Silicon Graphics. He's implemented OpenGL extensions and done OpenGL performance work. He currently works on IRIS Performer, a real-time visualization library that uses OpenGL.

Prior to SGI, he worked at Sun Microsystems, where he developed graphics hardware support software and graphics libraries, including XGL.

Tom is also an adjunct professor at Santa Clara University, where he teaches courses in computer graphics using the OpenGL library. He has also presented at the X Technical Conference, SIGGRAPH '96, and SGI's 1996 Developer Forum.
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Paula Womack

Paula Womack manages the OpenGL group at Silicon Graphics. She is also a member of the OpenGL Architectural Review Board (the OpenGL ARB) which is responsible for defining and enhancing OpenGL.

Prior to joining Silicon Graphics, Paula worked on OpenGL at Kubota and Digital Equipment. She has a B.S. in Computer Engineering from the University of California at San Diego.
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