

# James M. Stewart

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## GAME EXPERIENCE

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- 2K Marin**, Gameplay Engineer September 2010-current  
• Working on *XCOM* (console title in development)
- LucasArts**, Gameplay Engineer September 2008-September 2010  
• *Star Wars: The Force Unleashed II*, AI engineer (boss fights)  
• *Lucidity*, XBLA title, Gameplay engineer  
• Prototyped unannounced title
- Visual Concepts**, Presentation Engineer, *NBA 2K9* April 2008-September 2008  
• Presentation Scripting: Extended a proprietary scripting language to expose engine functionality for game flow, audio/commentary events, and UI animation.  
• Implemented new UI feature for 2K9: Coach's Clipboard, an interface for the user to send commands to AI players during live play or timeouts.  
• Implemented numerous statistical splashes and overlays (ala a televised basketball game).
- Stormfront Studios**, Programmer, *The Spiderwick Chronicles* May 2007-April 2008  
• Developed for Xbox 360, PC, PS2 and Wii platforms  
• Implemented several game objects, sprite powers (player power ups and attacks), AI behaviors, a dumbwaiter minigame, input buffering/filtering, and the cheat system.  
• Developed two C# tools: File monitor and server for a live update system (edits on PC appear in the game); and a GUI for all developers to manage local project/branch settings for Perforce and the Build system.  
• Implemented HUD elements: 3D power selector, quest pages and updates, multiplayer menus  
• Delivered Xbox 360 demo; implemented systems related to Xbox OS issues: achievements, rich presence, player profile management.  
• Maintained particle system and authoring tool. Optimizations and bug fixes.
- Gearbox Software**, Programming Intern, *Brothers-In-Arms: Hell's Highway* July-September 2006  
• Wrote script for the multiplayer mode of forthcoming title for PC and Xbox 360.  
• Gained experience with Unreal 3 engine, especially networking issues and UnrealScript.
- White Wolf Publishing, Inc.**, Copyeditor, Freelance Editor and Writer January 2000-June 2001  
• Co-authored nine sourcebooks for company's various role-playing properties.  
• Copyedited eight novels and 26 source books for company's various role-playing properties.

## TECHNOLOGY EXPERIENCE

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- AI Game Programming Wisdom 4** February 2008  
Contributing Author  
• Co-wrote article "Intrinsic Detail in Navigation Mesh Generation" for a yearly anthology of AI papers published by Charles River Media (co-author: Colt McAnlis)
- Master's Thesis: Pathfinding Over Streaming Terrain** August 2006-March 2007  
Sole Programmer  
• Streams data from hard drive to simulate massive terrain.  
• Features terrain synthesis, procedural navmesh generation, mesh refinement via RQT (restricted quadtree triangulation), A-star search using streaming navmesh.  
• Streaming database is multithreaded, multidimensional cache that uses file handles to couple clients from cache pages. Navmesh paging scales to large numbers of pathfinding clients.

# James M. Stewart

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**Grimoire, Half-Life 2 Total Conversion**  
Producer, Programmer

September 2006-March 2007

- Led a team of five programmers, four artists and six level designers in the creation of a spell-based arena-style fighting game using Valve's Source engine.
- Developed schedules and milestone criteria, managed team leads.
- Coded numerous entities, game rules, worked with artists to import models and animations.

**Game Framework /Dual Renderer**  
Sole Programmer

July 2005-October 2006

- Abstract interface with Direct 3D 9 and OpenGL 1.5 implementations.
- Flexible stream manager with D3D vertex streams/Open GL VBOs accepts geometry in multiple formats.
- Supports HLSL 3.0 and OpenGL assembly shaders, demo features bump mapping in both APIs.
- D3D Only implementations: Kawase Bloom Filter, true HDR with exposure adjustment and floating-point textures and render targets.
- Loads and renders Quake I and III BSPs (with ray-casting and Potentially Visible Set culling implemented) and .RAW height maps for terrain. Md2 animation.
- Includes exporter compatible with 3D Studio Max 7/8; exports bone data for animation.
- Controlled via a cooperative multitasking system implemented in Lua.

**Orbital: 2D Game Demo**  
Sole Programmer

July-October 2005

- A top-down space navigation game written using Windows GDI.
- Used FMOD Sound Ex API. Used effects and pitch APIs in addition to core functionality.
- 25 levels of play and a scripted victory sequence.

## EDUCATION

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**The Guildhall at SMU, Plano, TX**  
• Master of Science, Interactive Technology  
• Specialization: Software Development

July 2005-March 2007

**State University of New York, New Paltz, NY**  
• Post Graduate work, Computer Science

January 2004-June 2005

**University of Texas, Austin, TX**  
• Bachelor of Arts, English  
• Recipient of National Merit Scholarship and Dedman Scholarship

December 2000

## CORE SKILLS

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Strong knowledge of C++, some experience with C#, Java, J2ME  
Development experience with Unreal 3 and Unreal 2.X, and Valve's Source engine  
Console development experience: Xbox 360, PC, PS2, Wii  
Script Experience: Lua, Ruby, UnrealScript  
Proficient with OpenGL 1.5 and DirectX 9, esp. Direct 3D and FX framework  
Software Familiarity: MS Visual Studio .NET, Code Warrior, Radix Studio, Perforce, DevTrack, Subversion (TortoiseSVN), Adobe Photoshop CS2, 3D Studio Max 8, MS Project, Unreal Development Environment (UDE), XLAST, Araxis Merge  
API familiarity: Max API (3D Studio Max), Microsoft XDK