



The Guardian's Fluid VFX Secrets Revealed

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With the release of Buena Vista's THE GUARDIAN on Sept. 29, 2006, the potential of RealFlow 4 by Next Limit Technologies was revealed.

A strategic alliance among Next Limit Technologies, Hollywood vfx studio Flash Film Works and Fusion CI Studios (an R&D and fluid vfx studio) has leveled the playing field dominated by much larger studios.

Working in-house with the primary Flash Film Works, Mark Stasiuk of Fusion CI Studios developed the fluid vfx pipeline and supervised a team of seven artists using RealFlow 4 to create elements of stormy ocean surfaces such as boat wakes, whitecaps, bow sprays and enormous breaking waves. Relying on RF4's new 64-bit, multithreaded, stable fluid engine, in conjunction with the fluid dynamic functionality added by Stasiuk's customized scripting, vfx supervisor William Mesa ordered up complex, large-scale fluid elements of millions of particles that precisely fit the director's requirements.

"Disney's challenge to us was that we raise the bar for ocean fx even further than we had before." Said Mesa, who is also founder of Flash Film Works. "With the Next Limit engineering team supporting our production needs, the artistic & technical support of Fusion CIS and our own skilled team of RealFlow artists, we created fluid fx that went well beyond anyone's expectations. We feel well equipped to meet any water fx challenges that come our way."

"This was a serious test of RealFlow 4 in high-end production work," added Stasiuk. "The improved workflow and ease of script development meant we could stick to a fast-paced shot delivery schedule, even with the studio's demand for rich, photoreal fluid behaviors. I developed procedural Python scripts for specific natural phenomena, and deployed these as tools for the RealFlow artists. They could then take 3D elements like boats and ocean surfaces and quickly simulate interactive effects like realistic whitecaps and boat wakes, providing them as rendered elements for the compositors. Fluid, spray and mist passes were simulated over periods of a day or less for most elements, and rendered as self-shadowing particles over a few hours, even for simulations of millions of particles, using LightWave's 64-bit renderer.

With a PhD in fluid mechanics Stasiuk, co-founder of Fusion CI Studios, has worked in R & D with software developer Next Limit for the past three years while using RealFlow in features and commercials. The result has been a unique business relationship that has combined active production feedback and Stasiuk's scripting expertise to accelerate the development of Next Limit's RealFlow into an easily accessible, high-end production tool.

Stasiuk provides in-house production consultation for users of RealFlow and also creates fluid elements for films and commercials in his own studio. "The developments in the software during the past year have been phenomenal. Certainly RealFlow 4 has helped level the playing field in fluid fx," continued Stasiuk.

"Working with Mark on THE GUARDIAN'S production demands, we refined our fluid solution so that it can produce complex, photoreal fluid fx on a tight schedule for reasonable costs," says Next Limit Technologies president, Victor Gonzalez. Many



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studios can't afford the overhead of developing fluid solutions, but they still want to customize their tools to meet production needs. RF4 now gives them this opportunity. With increased competition and shrinking production budgets, off-the-shelf software like RealFlow represents the future trend in fluid fx."

For more info on Fusion CI Studios go to www.fusioncis.com.

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