

RenderWare Physics

RenderWare Physics 3.7 provides fast, realistic, multi-platform physics modeling that's suitable for use in every genre of game. **RenderWare Physics** provides the ability to add real-time dynamic behavior to your game objects. Now your characters can roll down a set of stairs and your structures collapse spectacularly. **RenderWare Physics** adds realism to your environments and introduces a new dimension of exciting gameplay opportunities. Everyday objects can move, fall and even break in reaction to the player, furniture can be pushed over and doors can be blown off their hinges!

Renderware Physics is now available in stand-alone form, as well as a fully leveraging component of **RenderWare Platform**.

RenderWare Physics - Features & Benefits

Character Physics

True-to-life character physics is available for reactionary in-game behaviors. Impressive human impact responses to being 'hit' by projectiles and uniquely complex events like falling down stairs are now available to developers of all genre of game. Use it to add richness, diversity and realism to in-game events, including spectacular ragdoll death sequences!

Rigid Body Dynamics

Dynamic interactions between in-game objects are realistically resolved with appropriate **RenderWare Physics** behaviors. You can achieve all the controllable and spectacular physics events you need for your development.

Fully Configurable Joints

Restriction for hard and soft joints can be set to dampen and cap movements across all degrees of freedom in the simulation of muscle-driven movement. **RenderWare Physics** also supports the driving of physical objects by animation, with customizable joint attributes such as velocity and position being exposed.

Physics Asset Creation Tool

Our GUI-driven authoring tool **P.A.C.T.** is a standalone editor that allows you to easily construct and then preview your physics assets for use in the real-time component of **RenderWare Physics**. You can intuitively assemble and tune joints for ragdoll characters, as well as complex configurations of solid objects for use in Rigid Body Dynamics.

Flexible Architecture & Customizable Pipeline

RenderWare Physics can either be quickly integrated, or comprehensively extended, depending on the developers needs, thanks to the flexibility of its architecture. The developer can either invoke the whole Physics pipeline with a single API call, or invoke the stages separately to allow customization

Flexible Primitive and Terrain Collisions

Achieve robust interactions between smooth or rugged landscapes and irregular objects within the game world, to attain the best physics accuracy and immersion levels.

Comprehensive Range of Collision Primitives

RenderWare Physics supports Plane, Sphere, Capsule (capped cylinder, useful for the limbs of a ragdoll), Box, Cylinder, Convex (a convex polygonal mesh) and Aggregate (a shaped formed by gluing together any combination of the volume types) primitives. **RenderWare Physics** also resolves collisions with static environments built from triangle meshes, which may be based on RenderWare Graphics objects or custom data.

Multi-platform Solver

Our fast and stable physics solver is optimized to each platform's processing capabilities. The user is given the ability to find the balance between the accuracy and fidelity of the simulation. In addition, we offer a small memory footprint and non-spiking performance.