

Havok Cloth

An Ace Up Your Sleeve



Havok Cloth is a performance-optimized development tool designed to minimize the time that game artists spend on animating the behavior of character garments and environmental cloth, while enabling increased realism for cutting-edge games.

Havok Cloth is easily customizable and fits into today's workflow to maximize the productivity of artists, animators and programmers. Havok Cloth also features out-of-the-box integration with Havok Physics and Havok Animation. As with all Havok products, Havok Cloth is built to deliver optimal performance on the latest hardware, with full support for leading game platforms.

Powerful Features for Ultra-Realistic Cloth Simulation

Outfit your studio with Havok Cloth, and get the tools you need to design games that are dressed for success:

Support for Multiple Cloth Types

Use Havok Cloth to quickly and easily animate character clothing such as shirts, trousers, skirts, capes and ponytails, as well as environmental cloth and deformables such as flags, curtains and foliage.

Customizable Behavior

With Havok Cloth, you can easily control cloth's ability to stretch and bend, its mass and its resistance to air. Garments have controllable constraints in various areas, limiting the extent to which they can move and twist in that portion of the cloth. Garments can also collide with specific bones of the underlying model to achieve highly realistic reactions.

Whole or Partial Simulation

When appropriate, you can simulate only a portion of a cloth object while the rest is skinned to the character, with smooth transitions between the two.

Simulation and Display Level of Detail

Havok Cloth features dynamic switching of simulation fidelity to make sure your game's main characters and items closest to the camera look the best. Havok Cloth also allows for decoupling of simulation and display representation, so you can apply cloth simulation to arbitrary meshes, such as thick cloth.

Integration with Current Tools

Havok Cloth supports standard polygon modeling tools, enabling you to work in the environments most familiar to you. Additional artist tools provided as modeler plug-ins allow you to flag meshes as Havok cloth objects, create collision-detection primitives and associate them with a garment, and specify cloth-specific properties using vertex color painting for per-vertex properties. The cloth run-time and cloth setup software development kits (SDKs) both provide hooks to integrate with custom rendering systems and mesh formats.



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Seamless Integration with Havok Solutions

Havok Cloth is designed to be integrated into any animation system, physics or game engine, but an out-of-the-box integration is provided for the Havok product line. Havok Cloth builds on Havok Physics to enable collisions with Havok Physics objects, and builds on Havok Animation to achieve integration with Havok skinning and driving of collision primitives from animation bones. Processing is done within the Havok filter pipeline, and previewing occurs via the Havok preview filter.

Game Performance Optimization

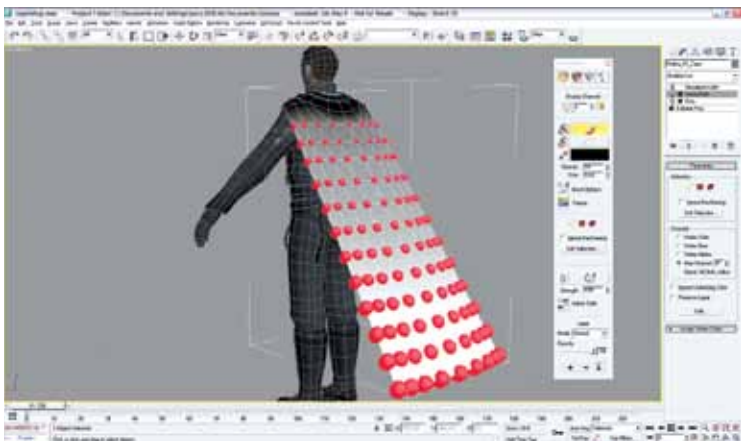
Havok Cloth is a fully multithreaded application, optimized for each supported platform to maximize game performance. It includes built-in support for instantiation of cloth items, with a minimal memory footprint on each instance.

Cross-Platform Support

Havok Cloth supports the Microsoft® Xbox 360®, Sony® PLAYSTATION®3, Nintendo® Wii and the PC.



| FEATURES | BENEFITS |
|--|---|
| Gaming platform optimization and full support for multithreading | Exceptional game performance and increased realism |
| Cross-platform support | Compelling content creation for games designed to run on Microsoft® Xbox 360®, Sony® PLAYSTATION®3 and the PC |
| Out-of-the-box integration with Havok Physics and Havok Animation | Intuitive access to proven Havok technology for increased functionality and ultra-realistic cloth effects |
| Integration with commercial modeling and animation tools, and custom rendering systems | Game artists can work in development environments most comfortable and familiar to them |



Havok Cloth provides cloth setup tools that take advantage of standard polygon modeling and vertex painting tools.

Support

Havok's first-class support, detailed help and support documentation, and online help are available for this product.

For More Information

www.havok.com