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Autodesk Maya 8.5 Key Features

Maya Nucleus Unified Simulation Framework

Maya 8.5 marks the first installment of Maya Nucleus technology within Maya. Maya Nucleus—Autodesk's next-generation unified simulation framework—is based on technology developed by award-winning Autodesk research scientist Jos Stam. The Maya Nucleus unified simulation framework is a linked particle system that interactively simulates a wide range of dynamic entities. It works with a variety of geometry types (curves, nonmanifold geometry, meshes with holes, and so forth) within a unified framework.

Maya nCloth

As the first Maya module built on Autodesk's new Maya Nucleus technology, Maya nCloth lets you quickly direct and control cloth, and other material simulations, in entirely new ways. Maya nCloth objects can be as stiff, viscous, or flowing, and as tightly or loosely woven as you desire. Rapidly create cloth-on-cloth simulations—such as a shirt over pants—with believable influences and collisions. Bend, stretch, shear, dent, or even tear Maya nCloth fabrics with ease. Beyond cloth, Maya nCloth lets you create deformable plastic and metal simulations, inflatable objects, as well as rigid-body and fluidic-type effects. Maya nCloth is available only in Autodesk® Maya® Unlimited.

Python

Python, a powerful and accessible scripting language, is now available in Maya. Not only has Python been integrated into the software at the same level as the Maya Embedded Language (MEL), its bindings to the OpenMaya API provide you an alternative language for plug-in development. Plus, Python modules can be imported into an external stand-alone Python interpreter for batch processing. With its higher-level language constructs, Python supports developer productivity while providing easily maintainable code. The language is also highly extensible, with a broad collection of third-party tools and modules freely available.

Expanded Platform Support

Maya 8.5 gives you more platform options. Maya is the only full-function 3D animation software to run on 32-bit Microsoft® Windows®, Linux®, and Mac OS® X as well as 64-bit Windows and Linux. With the release of Maya 8.5, Intel-based Macintosh® computer support is provided as a Universal binary. Use 32-bit Maya software on either the PowerPC® or Intel-based Macintosh computers.

mental ray Shaders

Realizing physically accurate outdoor environments has become significantly easier with the release of Maya 8.5. New physical sun and physical sky shaders help you create photorealistic skies based on the position of the sun—all with the power of mental ray® software's highly acclaimed, physically based rendering engine. Plus, new architectural and design shaders make it easier to create such effects as waxy floors, frosted glass, clay, and sand-blasted metals.

Transfer Polygon Attributes

Transfer Polygon Attributes allows you to transfer UV, color per vertex (CPV), and vertex position information between polygon meshes of differing topologies—even those that are separated in space or of different proportion and scale. This means that when you are working with two different versions of an object or character (for example, one high resolution and one low resolution), you can quickly transfer existing UV sets that have already been laid out to the lower-resolution model. With Maya 8.5 you can also use the Maya PaintEffects tool to blend between source and target deformations.

mental ray Workflow

New and reorganized render attributes make the mental ray for Maya render settings significantly more intuitive. Likewise, in the Render Option and Batch Render Option editors you can now configure mental ray to automatically determine, at the start of each render, the optimal memory limit, tile size, or number of threads. New with the release of Maya 8.5, high dynamic range (HDR) images can be generated from the mental ray batch bake option, the Transfer Map feature, or the texture bakeSet node.

Japan Localization

Core-level development efforts have allowed Autodesk to deliver a powerful new Japanese version of Maya. With the release of Maya 8.5, those who prefer to work in Japanese can do so while they navigate Maya, or customize their tools and user interface.

For a complete list of the Maya 8.5 software system requirements, visit www.autodesk.com/maya.

Learn More or Purchase

For more information and a complete list of features and enhancements in Maya 8.5, visit www.autodesk.com/maya.

For more information about the entire Autodesk 3D product portfolio, visit www.autodesk.com/me.

To purchase Autodesk products, contact an Autodesk Premier Solutions Provider or Autodesk Authorized Reseller. To locate the reseller nearest you, visit www.autodesk.com/reseller.

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Solve complex production challenges and create breathtaking 3D with Autodesk Maya 8.5 software.

Create engaging and lifelike digital images, realistic animations, and extraordinary visual effects with Autodesk® Maya® 3D modeling, animation, and rendering software. Whether you are a film or video artist, game developer, graphic artist, design visualization professional, or 3D enthusiast, Autodesk Maya 8.5 helps you realize your creative ideas.



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Image courtesy of Insomniac Games

Complete Complex Animation and Simulation Tasks Faster

Autodesk Maya 8.5 provides enhanced creative control, so you can complete complex animation and simulation tasks faster. Powerfully direct and control cloth, and other materials, in entirely new ways with Maya® nCloth. This innovative toolset marks the first installment in Maya of the breakthrough Maya® Nucleus technology, a powerful, new, unified simulation framework.

Manipulate, Customize, and Automate Maya

With the addition to Maya 8.5 of the industry-standard Python scripting language, you now have two powerful, interpreted languages with which to script Maya. Not only has Python been integrated into Maya at the same level as the software's original scripting language, MEL (Maya Embedded Language), its bindings to the OpenMaya API (Application Programming Interface) give you an alternative language for plug-in development. Python and MEL—combined with Maya software's renowned, open architecture—make it easier than ever to efficiently manipulate, customize, and automate Maya for use in next-generation pipelines and industry-leading productions.

Streamline Your 3D Workflow

Autodesk Maya 8.5 maximizes your productivity by simplifying and accelerating time-consuming tasks. Maya now gives you a variety of new and improved workflow tools: containers to simplify the display of complex node hierarchies; an improved interface to, and support for, CgFX shaders; symmetry and reflection operations for the Rotate and Scale tools; and much more. Your simulations and animations will also benefit from improved performance as new levels of multithreading in Maya 8.5 enable you to take advantage of the latest multicore hardware.

“The Maya API, as well as MEL and Python scripting, allows us the flexibility of extending Maya to satisfy the needs of A2M. This not only includes completely customizing the interface, but also creating production tools to build interactive and immersive game worlds.”

*David Lightbown, Senior Artistic Technical Director
A2M – Artificial Mind and Movement*



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Feature Film

Whether the project calls for the creation of 3D animatics for previsualization purposes or for the modeling, animating, and lighting of realistic computer graphics (CG) creatures, Maya is the tool of choice for digital artists working in film. Because the software is production proven, readily extensible, collaborative, and highly compatible with other toolsets, Maya allows facilities to roll out complex production pipelines—making it a favorite among technical directors, animation supervisors, and CTOs.



Image courtesy of Naughty Dog

Game Development

Game development facilities are increasingly using Maya as part of their in-game art pipelines. Maya software's powerful toolset help them model and texture level objects and characters, create and manage thousands of animations, assemble massive levels, and apply lighting effects. Plus, Maya is used to create stunning cinematics that play at certain points in the game to enhance the story.



Image courtesy of METAphrénie

Broadcast and Video Production

Today's production teams are asked to deliver shots ranging from captivating, stylized effects to photorealistic animation elements that blend seamlessly with live-action footage—with quality on par with feature film effects. Fortunately, the same tools used by the film industry can also enable production facilities to deliver content for the vast range of projects required by the broadcast graphics, short-form post, and episodic television production industries. Maya software's performance and flexibility enable artists working in these industries to quickly incorporate the inevitable client changes—and turn the job around fast.



Image courtesy of Alpha Vision

Design Visualization

Product designers, graphic artists, architects, visualization specialists, and engineers benefit from the extra level of creative expression that a comprehensive 3D effects, animation, and premier-quality rendering software can provide. The ability to integrate Maya with standard production tools—Adobe® Photoshop® and Illustrator® applications, and prominent computer-aided design (CAD) packages—enables them to quickly make it a part of their visualization workflow.