

AUTODESK® ENTERTAINMENT CREATION SUITES 2015

Autodesk® Entertainment Creation Suites 2015



Work the way you want

Sculpt and paint intuitively. Animate in real time.
Share data in a single step.

WHAT'S NEW

Autodesk Maya 2015

Bifrost Procedural Effects Platform
XGen Arbitrary Primitive Generator
Geodesic Voxel Binding
ShaderFX visual shader editor

Autodesk 3ds Max 2015

Point cloud support
Python scripting
Enhanced ActiveShade rendering
Accelerated viewport performance
ShaderFX visual shader editor

Autodesk Softimage 2015

Alembic caching
ICE enhancements
mental ray enhancements
Animated Syflex cloth maps

Autodesk Mudbox 2015

New symmetry options
Sculpt Layer and Paint Layer groups
Texture support and updating enhancements
Caliper tool

Autodesk MotionBuilder 2015

Microsoft® Kinect® support
Advanced camera options
Moves content library

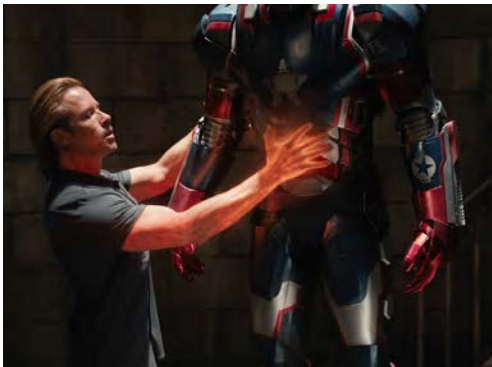
Explore a palette of industry-leading 3D animation toolsets

The Autodesk® Entertainment Creation Suites 2015 provide an affordable end-to-end creation solution, packed with tools used by leading artists working in visual effects, 3D game development, and other 3D animation production.

The Standard edition offers a choice of either Autodesk® 3ds Max® 2015 or Autodesk® Maya® 2015 3D modeling and animation software, together with Autodesk® Mudbox® 2015 digital sculpting and painting software, and Autodesk®

MotionBuilder® 2015 real-time virtual production and character animation software. With the Ultimate edition, you get everything in the Standard edition together with both Maya and 3ds Max, as well as Autodesk® Softimage® 2015 visual effects and animation software.

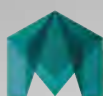
Integrated through single-step interoperability workflows and common look and feel elements, the Suites help increase productivity and provide enhanced creative opportunities—at a significant cost saving over purchasing all of the products individually.



Iron Man 3, © 2013 Marvel



KILLZONE Shadow Fall, image courtesy of Guerrilla Games



AUTODESK® MAYA® 2015

“Working in Maya for rigging is great because it’s the standard animation package worldwide. And it is just a tool that is so easily movable between companies and it’s so adaptable to what we do.”

—Tim Forbes
Character Rigger
Image Engine

Autodesk Maya 2015

Maya 2015 adds new capabilities to its high-end character and effects toolsets with powerful new toolsets for simulating and rendering photorealistic liquids; creating hair, fur, feathers, grass, and foliage; and skinning characters. In addition, support for Pixar’s OpenSubdiv libraries, enhanced polygon modeling tools, and new UV options help accelerate performance and increase productivity, while a new node-based visual shader editor offers an artist-friendly way to create and preview complex real-time shaders directly in the viewport.

Key New Features in Maya 2015

Bifrost Procedural Effects Platform

Maya 2015 introduces a powerful new procedural effects platform developed from the industry-renowned Naiad technology, and further refined for enhanced ease-of-use. Fully integrated into Maya, Bifrost offers photorealistic simulation and rendering of liquids; results can be previewed interactively in the high-performance Viewport 2.0 hardware-accelerated display, and rendered in the NVIDIA® mental ray® renderer. You can choose whether to mesh liquids with a new particle surfer, or render the voxels directly.

XGen Arbitrary Primitive Generator

Now you have access to the XGen Arbitrary Primitive Generator technology used by Walt Disney Animation Studios in the hit animated films *Frozen*, *Tangled*, and *Bolt*, and by Pixar Animation Studios in *Toy Story 3*. XGen enables you to generate curves, spheres, and custom geometry on the surface of polygon meshes in order to create and groom hair, fur, and feathers, and quickly populate large landscapes with grass, foliage, trees, rocks, and debris trails. Geometry is created procedurally at render time, and previewed interactively in the Maya Viewport 2.0 hardware-accelerated display.

Geodesic Voxel Binding

Designed from the ground up by Autodesk software engineers, Geodesic Voxel Binding is an innovative new skinning method for binding geometry to joint skeletons that enables you to produce high-quality production-ready results in less time, often with only a few clicks. Unlike other volumetric skinning methods that are also easy to use, Geodesic Voxel Binding can handle complex geometry that is not watertight and can contain non-manifold or overlapping components—as is frequently the case with real-world production meshes.

ShaderFX

Easily create advanced HLSL, GLSL, and CgFX viewport shaders with the ShaderFX real-time visual shader editor. Shader networks are created by connecting different nodes together using an intuitive click-drag workflow; select from a powerful array of floating-point values, mathematical operations, texture maps, normal maps, and color nodes. The resulting materials can be visualized in real time in Viewport 2.0. Use the advanced mode to drill down deeper into the inner workings of each basic node.

OpenSubdiv

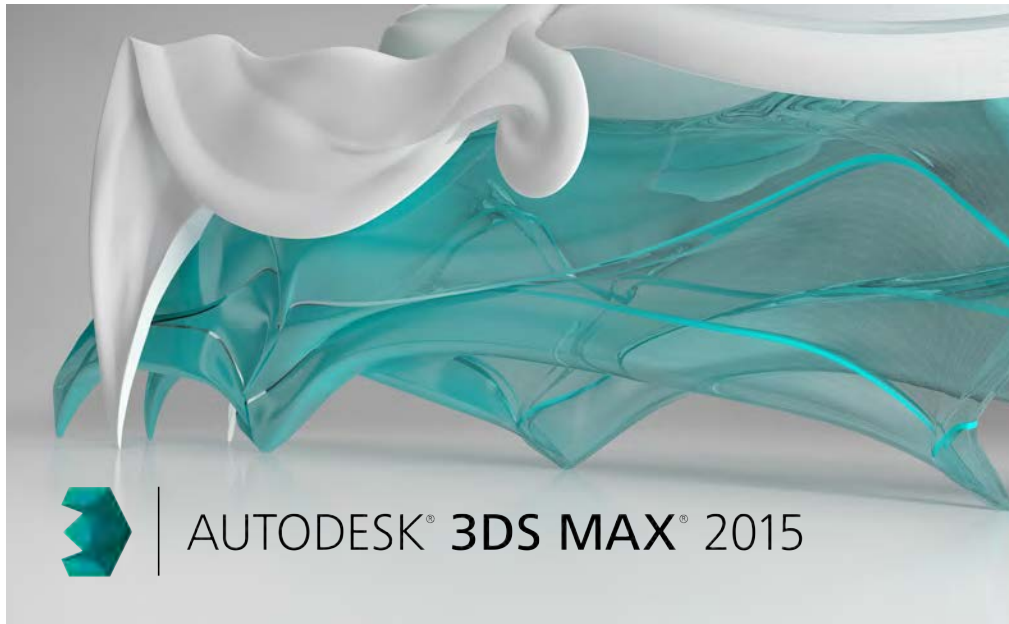
Now you can represent subdivision surfaces in Maya using the OpenSubdiv libraries open-sourced by Pixar, and take advantage of both parallel CPU and GPU architectures for dramatically faster draw performance when deforming. In addition, you can visualize displacement maps interactively without the need to render, for a better WYSIWYG experience that translates to greater productivity and more accurate realization of creative intent. OpenSubdiv surfaces also accurately match those generated in Pixar’s RenderMan® renderer.



Mr Hublot, © ZEILT productions, Arte, Watt Frame

“3ds Max is a great software if you are a single artist or are working on a small team and you need to fix something very quickly.”

—Tomek Baginski
Director
Platige Image



Autodesk 3ds Max 2015

With support for point cloud datasets, enhanced viewport performance, and new scene management workflows, 3ds Max 2015 helps you handle greater complexity without slowing down. In addition, a more responsive ActiveShade that now supports mental ray and a new artist-friendly node-based visual shader editor help increase efficiency for lighting, shading, and rendering tasks. Meanwhile, with support for Python® scripting, 3ds Max 2015 is more easily extended and customized.

Key New Features in 3ds Max 2015

Point cloud support

Create more precise models from real-world references, with the new ability to import and visualize massive datasets captured from reality as point clouds. View point clouds in true color in the 3ds Max viewport, interactively adjust the extent of the cloud displayed, and create new geometry in context by snapping to point cloud vertices. Render point clouds with shadows in mental ray or

visualize CG objects in real-world contexts in order to better communicate designs, or to previsualize animation shots.

Python scripting

New support for the popular and easy-to-learn Python® scripting language helps you extend and customize 3ds Max 2015, and more easily integrate it into a Python-based pipeline. Execute Python scripts from MAXScript and the 3ds Max command line, and access a subset of the 3ds Max SDK (software development kit) from Python scripts, including the ability to evaluate MAXScript code.

ActiveShade rendering enhancements

The ActiveShade preview rendering window now supports mental ray, in addition to the NVIDIA® iray® renderer previously supported. With ActiveShade, you can see the effects of changing lighting or materials interactively, helping you more easily refine your work. For both iray and mental ray, interactive updates are now



The Crew, image courtesy of Unit Image

faster, while viewport navigation and switching, adjustments to light parameters, and certain other scene changes are captured more frequently, offering finer grain updates.

Accelerated viewport performance

Working in the 3ds Max viewport is now substantially faster; a number of improvements help accelerate navigation, selection, and viewport texture baking, resulting in greater interactivity, especially with dense meshes and scenes with many texture maps. In addition, anti-aliasing can now be enabled with minimal impact on performance—so you can work in a higher fidelity environment without sacrificing speed.

ShaderFX

Easily create advanced HLSL viewport shaders with the ShaderFX real-time visual shader editor. Shader networks are created by connecting different nodes together using an intuitive click-drag workflow; select from a powerful array of floating-point values, mathematical operations, texture maps, normal maps, and color nodes. The resulting materials can be visualized in real time in the 3ds Max viewport. Use the advanced mode to drill down deeper into the inner workings of each basic node.



BATMAN™: ARKHAM ORIGINS software © 2013 Warner Bros. Entertainment Inc. image courtesy of WB Games Montréal



Doctor Who, Image courtesy of Milk

Autodesk Softimage 2015 (final release)

Softimage 2015 helps you more efficiently create and manage the highly detailed assets required by today's demanding entertainment productions. Enhancements to the ICE platform, access to previously unexposed functionality in the NVIDIA® mental ray® renderer, and animatable weight maps in Syflex cloth bring new creative possibilities, while support for Alembic caching and progressive rendering in mental ray help you elegantly handle the increasingly complex data sets you face.

Key New Features in Softimage 2015

Alembic caching

Now you can read and write the Alembic open computer graphics interchange framework format in Softimage. Co-developed by Sony Pictures Imageworks Inc. and Lucasfilm Ltd., Alembic distills complex animated and simulated data into application-independent baked geometry. As a result, massive datasets can be more easily passed between disciplines—as an example, animation and lighting—helping reduce the overhead and loss of interactivity associated with transferring fully editable scene data.

ICE performance and usability enhancements

The powerful ICE platform now offers enhanced performance and usability to help you create stunning large-scale procedural effects in less

time. With overall improvements to performance and memory usage; offline editing and muting for increased responsiveness when editing ICE trees; and a number of workflow improvements to the ICE editor, it's now faster and easier to create and edit complex, highly detailed effects in ICE.

Access to unexposed mental ray functionality

Activate functions in the NVIDIA® mental ray® renderer that have not yet been exposed in the Softimage user interface by using mental ray string options. Light Importance Sampling and Native Image Based Lighting are examples of the functionalities that can be accessed in this manner.

Support for mental ray progressive rendering

Take advantage of progressive rendering for mental ray, where the complete image is first rendered at a lower quality, and then refined step by step. This enables you to more quickly adjust shaders and lighting, without waiting for the full-quality render to be completed.

Animated weight maps in Syflex cloth

It's now possible to use a sequence of maps to influence various attributes on a per-frame basis in Syflex cloth simulations, enabling more interesting and sophisticated simulations to be created. As an example, the cloth's Mass attribute might be animated over time using a series of maps to simulate cloth being pulled from water and gradually losing its weight as the water drains from it.

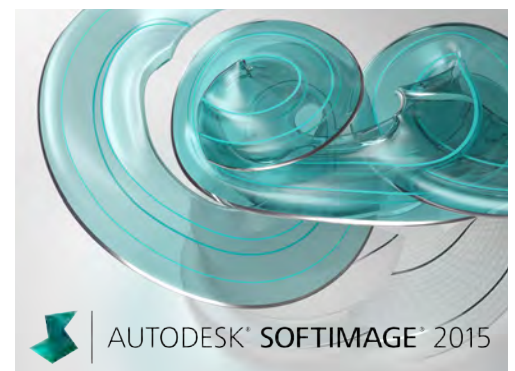


Image courtesy of UVPFACTORY

Autodesk Mudbox 2015

Mudbox 2015 offers enhanced support for real-world production workflows, with streamlined mesh refinement, new Sculpt Layer and Paint Layer groups, and better interoperability with other content creation solutions, especially Maya 2015*. You can now make meshes topologically symmetrical while retopologizing them or as a separate process; meanwhile, the ability to group Sculpt Layers and Paint Layers makes it easier to organize and isolate aspects of your work.

* See the *Interoperability enhancements* section.

Key new features in Mudbox 2015

New symmetry options

It's now possible to enforce topologically symmetrical results when retopologizing meshes. Symmetry can be based on the source topology—enabling meshes to retain both topological symmetry and spatial asymmetry (for example, a face with a lopsided grin)—or on a local or world axis, for completely symmetrical results; you can choose whether to copy painting and sculpting detail from one or both sides of the source. Existing meshes can also be quickly made symmetrical across one or more axes without retopologizing, with a new Make Symmetrical

tool—this is particularly useful for models scanned from real-world objects, which often appear symmetrical but are not.

Sculpt Layer and Paint Layer groups

You can now organize your Sculpt Layers and Paint Layers into layer groups, making it easier to quickly identify particular layers in complex scenes, to toggle visibility in order to focus on a particular aspect of your work, or to duplicate multiple layers at once. Sculpt Layer groups can also be used to receive and store Blend Shape targets from Maya 2015, while Paint Layer groups enable you to manually merge layers or to choose to flatten groups on export.

Enhanced texture export and updating

An enhanced texture export and updating workflow enables you to set different export paths for different channels and paint layers; paths will be remembered, so that textures can be repeatedly updated with a single click during painting, regardless of the target downstream application and regardless of whether or not the shaders are supported by Mudbox. This offers greater flexibility for iterative painting workflows within custom or proprietary pipelines, and helps reduce manual relinking, helping to increase productivity.



Image courtesy of Dan Roatry



47 Ronin, Image courtesy of Milk



New Caliper tool

Measure the distance between two points on a model or along a curve with the new Caliper tool. This is useful for helping to make sure that meshes match a desired real-world scale or fit with other objects or environments that may be created separately.

Support for Intel HD graphics 4000

Mudbox can now run on certain hardware configurations—notably certain Windows® 8 operating system hybrid tablet/PCs—with processors that employ Intel® HD graphics 4000. This enables you to take advantage of a wider range of hardware to enjoy intuitive pen-based and multi-touch workflows within Mudbox.

Autodesk MotionBuilder 2015

MotionBuilder 2015 offers support for affordable, consumer-level motion capture devices and a library of pre-built moves to cover a range of commonly required animations. In addition, new advanced camera options help you more readily mimic real-world cinematography, to better preserve directors' creative intent.

Key new features in MotionBuilder 2015

Support for consumer motion-capture devices

Now you can use the popular Microsoft® Kinect® consumer motion capture device to easily capture body performances, and use them to drive their MotionBuilder characters. Kinect is currently available for the Windows® operating system. With the MotionBuilder interface, you can add support for certain other similar devices.

New advanced camera options

Animatable Depth of Field helps you mimic a change in aperture in the real camera, affecting the range of objects in view that are in focus, while a Follow Focus option enables you to lock a camera's focus on a particular object in the scene, keeping it in focus as its distance to the camera changes.

Moves content library

MotionBuilder 2015 ships with an additional 100 useful animations in Autodesk® FBX® asset exchange format, which you can combine, blend, and layer to help block out or previsualize your scenes in less time, or use as a starting point for further refinement. Categories are walking, running, jumping, crawling, falling, fighting, idling, furniture, and weapons.

More flexible marker assignment

You can now adjust the position of the character within the marker cloud after assigning markers, offering greater flexibility in how captured data is mapped to a CG character that may have different proportions from the original actor.



Interoperability enhancements

Ptex and multi-tile textures

Ptex and multi-tile UV textures can now be exchanged between Maya 2015 and Mudbox 2015 as part of the single-step interoperability feature, enabling you to take advantage of an iterative round-trip workflow between Mudbox and Maya. Ptex textures offer a UV-less painting workflow, while multi-tile textures enable artists to paint outside of the 0-1 UV space.

Image plane matching

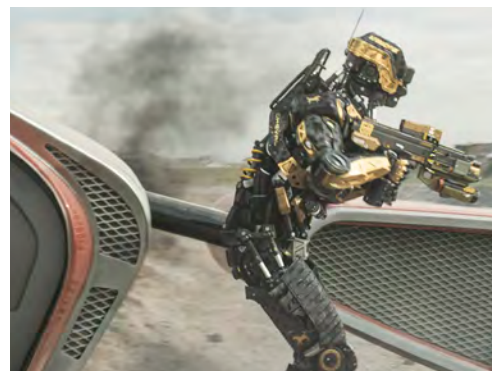
Set up an image plane in Maya 2015 and use it as a reference for base mesh modeling, then send it to Mudbox 2015 along with the model for the addition of finer details as part of the single-step interoperability workflow; many image plane parameter settings are retained, so you can continue to use the same reference without the need to readjust the image to match.

Enhanced blend shape interoperability

It's now possible to take Blend Shapes with multiple targets—or multiple Blend Shapes per mesh—from Maya 2015 into Mudbox 2015 for sculpting, and then merge them back into the original Maya scene. Blend Shapes are stored as Sculpt Layer groups in Mudbox; new targets can be added or existing ones deleted within Mudbox, and correctly updated in Maya.

Easier cross-product CrowdFX workflows

Character animations consisting of animations, skeletons, and envelopes created in MotionBuilder 2015 can now be imported into Softimage 2015 in a single step, making it much easier to use them with the powerful CrowdFX crowd simulation feature. Moreover, a single click can now take CrowdFX simulations from Softimage 2015 to Maya 2015 for inclusion with other scene elements.



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“The Entertainment Creation Suites offer fantastic versatility and efficiency on the studio floor. We have the ability to quickly switch packages as needed depending on the specifics of a project.”

—Will Cohen

CEO & Executive Producer
MILK VISUAL EFFECTS

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