

The shape of things to come

Autodesk Mudbox 3D digital sculpting and texture painting software gives modelers and texture artists the freedom to create production-ready 3D digital artwork without worrying about the technical details.

At its core, Mudbox is extremely well built and well thought out which allows for the addition of new tools that remain easy to use, yet are extremely powerful. With each new release, Mudbox allows me to focus more on the art I'm creating instead of the technical hurdles.

— Peter Zoppi



Image courtesy of Peter Zoppi.

Overview

Create production-ready 3D digital artwork with Autodesk® Mudbox™ digital sculpting and texture painting software. Designed by professional artists in the game, film, television, and design industries, Mudbox combines a highly intuitive user interface with a powerful creative toolset of stencils and brushes to help you create ultra-realistic 3D characters, engaging environments, stylized props, and more.

With familiar workflows and terminology and a streamlined, intuitive workspace, you can become productive on your first day with Mudbox—whether you're switching from an alternative solution, or new to 3D sculpting and texture painting programs entirely.

Originally created in a real-world production environment, and subsequently proven on many demanding film and games projects, Mudbox also provides the depth and flexibility to tackle complex production challenges as they arise. With features like a node-based architecture, and support for n-gons, multiple UV tiles per texture, and custom CgFX shaders, you can engineer creative solutions to unique or unanticipated production problems. Mudbox is available for Microsoft Windows® and Apple Mac OS® X operating systems.



Image courtesy of Balazs Kiss. www.kissb.net.



Images courtesy of Kenichi Nishida.

High-Quality 3D Paint

Paint multiple layers for multiple texture channels on multiple high-resolution objects:

- Apply paint directly onto high-resolution 3D models and see the results immediately.
- Apply detail precisely where required, regardless of UV distortion or surface complexity. Paint in true 3D space, in UV space in the 3D view, or with screen-space projection.
- Paint Diffuse, Specular, Gloss, Emissive, Bump, Normal, and Reflection maps directly on your model.
- Select from Paint, Erase, Clone, and Dry brushes, and customize their shape with image stamps and adjustable falloff curves.
- Selectively edit and manipulate existing paint and photo-based layers with new image adjustment brushes: Blur, Dodge, Burn, Contrast, Sponge, Hue, Hue Shift, and Invert.

- Selectively paint reference images onto the model from a particular viewpoint.
- Control how paint layers composite together to create a final image by selecting from one of the new blend modes: Multiply, Screen, Add, or Overlay.

Flexible Layering System

Explore creative options and iterate freely to create, compare, store, and blend multiple versions of your paint and sculpting work using the flexible, nondestructive layering system:

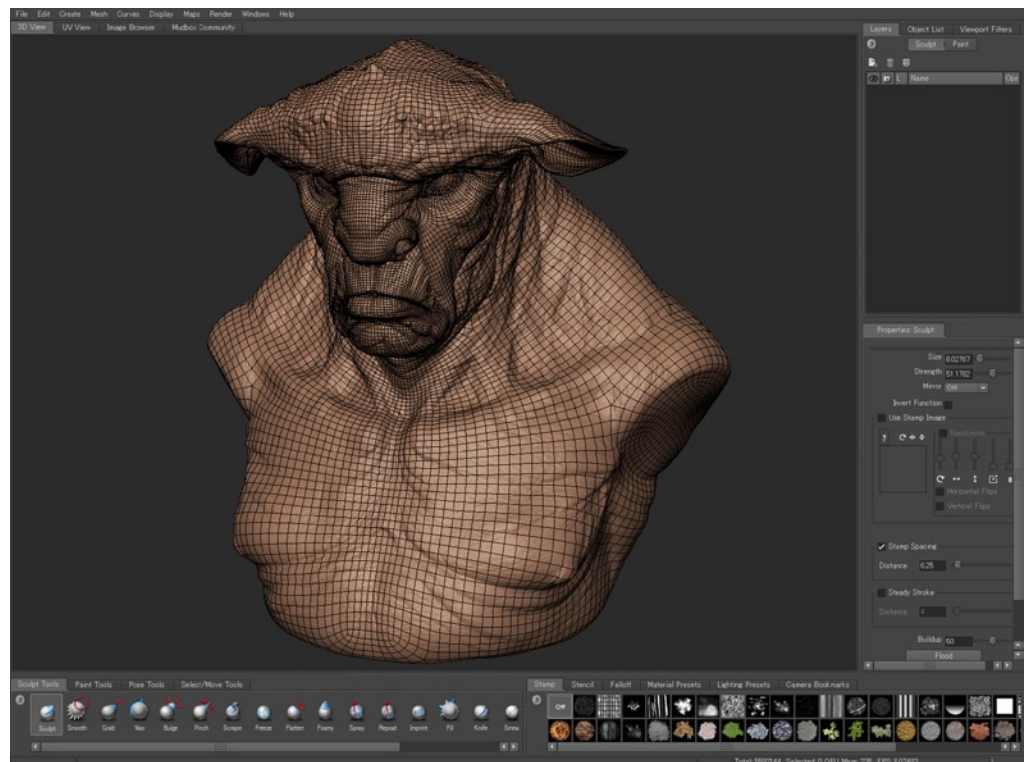
- Selectively edit, erase, and blend layers nondestructively, using paintable layer masks.
- Duplicate, merge, flatten, and reorder layers.
- Blend layers using interactive multiplier sliders and layer masks.
- Mirror or flip the detail stored in one or more layers.

Key Features

Best-in-Class Sculpting Toolset

Sculpt, design, and detail any organic or hard-surface model and achieve smooth, accurate, and refined results:

- Select from an extensive range of intelligently designed default brushes that replicate real-world sculpting paradigms: Sculpt, Smooth, Grab, Pinch, Flatten, Foamy, Spray, Repeat, Imprint, Wax, Scrape, Fill, Knife, Smear, Bulge, Contrast, and Freeze.
- Create custom brushes with user-defined falloff curves and image stamps for an infinite range of effects.
- Sculpt both sides of topologically symmetrical models simultaneously—even when they are in an asymmetrical pose—with the powerful tangent space mirroring functionality.
- Use stencils to quickly add detail, and curves to precisely control brush movement. Brush textures directly into your mesh in 3D, and add high-quality detail by displacing your mesh with images.
- Model using reference images, with multiple cameras each with its own image plane.
- Accelerate design, sculpting, and approval phases with powerful new tools for deforming and posing models.
- Sculpt complex forms immediately using vector displacement maps as stamps and stencils.



Images courtesy of Kenichi Nishida.

Intuitive User Interface

Become productive in hours, rather than weeks, with the easy-to-learn Mudbox user interface:

- Enjoy a toolset designed for artists by artists, inspired by real-world tools.
- Feel at ease from day one with familiar workflows, terminology, and hotkeys.
- Accelerate your workflow through Hover Pick functionality, hotkeys, and other tools.
- Easily switch between sculpting and painting tools to develop shape and texture in tandem.



Image courtesy of Mashru Mishu.



Image courtesy of Mashru Mishu.

Production-Ready Texture Baking

Create high-quality, accurate Normal, Displacement, Vector Displacement, and Ambient Occlusion maps:

- Extract maps using a new Vector Displacement method to represent displacements that do not simply follow the normal.
- Transfer data from highly-detailed sculpted surfaces or laser scans into the form required by film and game pipelines. Map data between multiple arbitrary objects with differing topologies.
- Detail can be baked into 8-, 16-, and 32-bit maps.
- Generate smooth, high-quality maps using extraction options that address issues related to poly faceting by extracting between the limit surfaces of the given meshes.
- Bake normal maps that are compatible with Autodesk® Maya® and Autodesk® 3ds Max® software.
- Create ambient occlusion maps for extremely high-resolution models: bake the soft shadows and details of a model out to an image which can be re-used without expensive recalculations.
- For customized pipelines, developers can write their own baking function within Mudbox.

On-Target Working Environment

Work in a high-fidelity display environment that closely resembles the final rendered output to help you identify problems early and create presentations with maximum impact:

- Interactively paint and view multiple material channels (such as bump and reflection) in real time.
- Paint directly onto sculpted detail.
- Immediately see how your model will look with render-quality results directly in the viewport - accurate 3D shadows, ambient occlusion, and a choice of light types, including HDR image-based lighting.
- Use true 3D cameras to view your model as it will be seen by the audience, and optionally import production cameras from Maya or 3ds Max.
- Import skeletons from Maya or 3ds Max to validate and test your design.
- Customize the display to match a target platform with CG shaders and viewport filters.
- Preview and edit your normal maps directly on your model in the 3D View.



Image courtesy of Jukka Tahtinen.



Image courtesy of Dave Cardwell.

Performance That Scales

Create incredible detail working directly with extremely high-resolution meshes, without slowing down:

- Evaluate even the densest models at full resolution while tumbling, using multiple real-time cameras including true perspective and orthographic cameras.
- Keep the creativity flowing where other applications become unusable, with brush performance that scales with scene size.

Seamless Pipeline Integration

Mudbox integrates smoothly into your pipeline, enabling you to leverage the strengths of industry-leading 2D and 3D applications:

- Exchange data with Maya, 3ds Max, and Autodesk® Softimage® via Autodesk® FBX® technology; with Maya 2011, data exchange is a single click.
- Import and Export meshes as OBJ, and textures as BMP, EXR, JPEG, PNG, TIF, and GIF (import only).
- Export paint layers and UV layouts as multi-layer PSD files; edit them in Adobe® Photoshop® and then re-import.

- Create subdivided UVs compatible with Pixar RenderMan® renderer with the UV Smoothing option.
- Customize and extend Mudbox via the C++ API (Application Programming Interface).

In-Product Community

Get more out of your Mudbox experience with online community resources accessible directly from the Mudbox application:

- Select from hundreds of stamps, stencils, base meshes, and tutorials in the Mudbox Library, and upload your own contributions.

- Upload gallery images and turntables to share your work and to receive valuable peer feedback and ratings.
- Gain inspiration from the work of talented Mudbox artists, and vote for your favorites.
- Accumulate points as others vote on or download your contributions, and ascend the community leader board for status, awards, and prizes.

www.autodesk.com/mudbox



Uncharted 2: Among Thieves™.

Images courtesy of Naughty Dog, Inc.

