Image courtesy of Rashed Abdullah.

A faster and more secure 3ds Max

Focused on workflow efficiency, easy-to-use texturing and rendering tools, and offering a safe and secure workspace environment, 3ds Max now has new rendering capabilities added to Arnold, a new Bake to Texture functionality, and enhanced features to popular modeling tools.

What's New in 3ds Max

Safe and Secure Environment

Security

- Safe Scene Script Execution offers protection against malicious scripts embedded in 3ds Max scene files, regardless of whether these scripts use Maxscript, Python or .NET commands, by blocking the execution of unsafe commands.

- The Malware Removal functionality detects and removes known malicious scripts from scene files and startup scripts. This prevents the spread of malicious code to other users. The malware removal functionality is powered by the Scene Security Tools plugin, which is updated whenever Autodesk becomes aware of a new malicious script.

  In 3ds Max 2022, users are notified when a new version of the Scene Security Tools is available on the Autodesk App Store.

Workflow Efficiency

Smart Extrude

- <u>Edit Poly modifier support</u>: Smart Extrude has been extended into the Edit Poly modifier, providing the same functionality and features users have come to love from the Editable Poly implementation. This extension of Smart Extrude enables artists to further benefit from this freeform modeling method, and complement their poly modeling workflows in 3ds Max.

- <u>"Cut Through" implementation</u>: When first introduced in 3ds Max 2021.2, the Smart Extrude functionality enabled artists to extrude with fewer constraints during the creative modeling process. "Cut Through", the latest addition to Smart Extrude, further enhances this functionality to give artists the extrude they deserve.

  When performing an inward or outward Smart Extrusion (Shift+LMB drag operation on an Edit Poly or Editable Poly), complete intersections of these results will now add, unify, or completely cut-through and remove faces of the operand result with your mesh geometry. This new Smart Extrude enhancement enables artists to freely construct unified mesh geometry, enhancing the poly modeling experience in 3ds Max.

Slice Modifier

3ds Max includes performance enhancements to the Slice modifier, and new modeling features based on user feedback. These enhancements and new features are powerful complements to 3ds Max workflows, as they reduce data processing operations for Autodesk Retopology Tools in 3ds Max.
- <u>Capping</u>: Open holes created by the Slice operation can now be capped along their boundary edges on both Mesh and Poly objects.
- <u>Multi-Axis Cutting</u>: Perform a X-, Y-, and/or Z-aligned planar slice of your mesh based on the position of the slice gizmo through a single modifier.
- <u>Radial Slice</u>: A new Radial slice operation enables control of the cutting results based on a set of user-defined min and max angles.
- <u>Alignment options</u>: Quickly align the cutting gizmo to faces on an object, or reference another animatable object in your scene.

Extrude Modifier

The Extrude modifier, one of the most frequently used modifiers in 3ds Max, offers significant performance improvements to the speed of the initial extrude calculation, and to the responsiveness of the output when adjusting the amount parameter. This allows complex splines,

which used to take minutes to process, to be operated on in a matter of seconds. Artists can achieve a desired look faster and more interactively.

Symmetry Modifier

The Symmetry modifier, a commonly used modeling modifier in 3ds Max, includes new features and enhancements that benefit modeling and retopology workflows in 3ds Max. Symmetry can now produce faster results, and offers a more interactive experience in the Viewport.

- <u>Multi-Axis Symmetry</u>: Planar symmetry has been updated to perform, X, Y, and/or Z symmetry results on the symmetry gizmo.
- <u>Radial Symmetry</u>: A new Radial symmetry function allows artists to quickly duplicate and repeat a geometry around the gizmo center. This new feature based on user feedback enables artists to rapidly create new variations.
- <u>Alignment options</u>: Align the symmetry gizmo to faces on an object, or reference another animatable object in your scene.

AutoSmooth

AutoSmooth operations, which are used to improve the visual quality of mesh data throughout 3ds Max, have been updated to generate new smoothing data faster, regardless of whether you are smoothing thousands or millions of faces. This update helps artists when adjusting smoothing data on objects like Mesh, Poly or Spline. It also benefits other modifiers such as Smooth, Chamfer, Edit Mesh, Edit Poly, ProOptimize, and many more.

Relax Modifier

3ds Max now includes a "volume preserve" option which has been added to the Relax modifier. When active, the Relax algorithm will perform additional calculations to reduce small detail and noise out from models, all while retaining the shape and definition of the overall mesh that the modifier has been applied to.

This functionality is especially useful when working with data containing a large amount of unwanted small or micro surface detail, as seen with Scan and Sculpt data. Reducing this small "noisy" data with Relax can improve the processing time of the Autodesk Retopology Tools for 3ds Max.

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Accessible Texturing and Rendering

Rendering

- New render configuration window; faster, snappier, all QT-based UI.
- Quicksilver render settings are now QT-based, for a faster, more responsive experience. The Viewport Bloom settings have also been synced to the Quicksilver settings.
- By utilizing the new Viewport Ambient Occlusion sampling value in the Viewport configuration settings, users can further refine their Viewport lookdev and optimize their GPU performance by increasing or decreasing the Viewport Ambient Occlusion quality.

Arnold

- The 'Auto-tx' can now be used to automate the process of converting texture files to .tx file format at render time.

- Imagers can now be applied, removed, re-ordered, and edited directly in a dedicated tab of the Arnold RenderView to post-process rendering without additional render time.
  - A new Light Mixer imager makes it possible to interactively edit the contribution of each light group AOVs during and after rendering, without restarting the render.
  - Bloom or "glow", a post-processing effect, has been added to the Lens Effect imager to blur pixels above a given threshold across the frame and simulate light bleeding on an imperfect lens.
  - Noice Denoiser is now a post-processing effect. Artists can automatically denoise images every time they render a scene. Edit the denoising settings and see the resulting image directly in the render view.
  - OptiX Denoiser: The OptiX™ denoiser is now available as a post-processing effect. This imager also exposes additional controls for clamping and blending the result.

Bake to Texture

- The Bake to Texture interface has been simplified to offer easier navigation and selection of baked map types by grouping render elements under common map names. Now, users don't need to remember the specific element name in the render engine they are using to bake frequently used map types like color maps, normal maps, and other PBR compatible maps that are needed in production.

  Bake to Texture now includes a few utility maps, such as Rounded Corners and Material ID maps, as examples of what previously required a complex material setup workflow prior to baking. These utility maps now achieve the same outcome in only a few clicks.

Viewports

- Turn any floating Viewport into a full-screen, borderless view. When using Presentation Mode, all gizmos are hidden allowing your 3d scene to be the true hero.

  Use the "CTRL+Space" hotkey to jump in/out of full-screen Presentation Mode.

Bringing your ideas to life

Autodesk is committed to responding quickly to 3ds Max user feedback.
Join the community and submit your ideas and feedback at 3dsmaxfeedback.autodesk.com.

Consult the 3ds Max 2022 Release Notes and 3ds Max Public Roadmap for further information.
Check out What's New in 3ds Max? for a look back at how far 3ds Max has come since 2016.
Learn how customers around the world are using 3ds Max today on the Autodesk AREA website

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