

Key Features and Benefits

Autodesk® 3ds Max® Design 2012 software delivers powerful new rendering toolsets, enhanced iterative workflows, and an accelerated graphics core that together help increase overall productivity. With this release, Autodesk helps designers to more effectively communicate design intent in order to influence key stakeholders and accelerate the path to new business.

Featuring the physically accurate “point-and-shoot” iray® renderer from mental images, versatile, resolution-independent procedural textures, and new stylized rendering capabilities, 3ds Max Design 2012 helps designers present their creative vision more effectively. Moreover, with the Nitrous render-quality accelerated viewports, designers can rapidly iterate on their ideas to achieve more compelling end results. Furthermore, with new interoperability with the Autodesk® Alias® industrial design software products and automated workflows with AutoCAD® Civil 3D® software, CAD data is more easily aggregated into powerful storytelling visualizations.

Top Features and Benefits

Nitrous Accelerated Graphics Core

A top priority of the Excalibur (XBR) initiative to revitalize 3ds Max Design is to introduce a new viewport system engineered to provide dramatic improvements in performance and visual quality. Nitrous leverages accelerated GPUs and multi-core workstations to enable designers to iterate faster and to handle larger data sets with limited impact on interactivity. Advanced scene management techniques, together with multithreaded viewport scene traversal and material evaluation, result in a smoother, more responsive workflow. Moreover, Nitrous provides a render-quality display environment that supports unlimited lights, soft shadows, screen-space ambient occlusion, tone-mapping, and higher-quality transparency. It also enables progressive refinement of image quality without blocking changes to the scene, helping designers make better creative and aesthetic decisions in the context of their final output.

Autodesk Alias Products Interoperability

Enjoy smoother interoperability with Autodesk® Alias® Design software for industrial design, with the new ability to import .WIRE files natively into 3ds Max Design as Bodies objects, preserving object names, hierarchies, layers, and material names. Designers can now interactively adjust tessellation results inside 3ds Max Design to help fine-tune their visualization, and add sculpted details on top of

Alias Design reference data using the intuitive Graphite polygon modeling toolset in 3ds Max Design. Graphite now features a new French curve-like 'Constrain to Spline' mode to help guide the brush as changes are made to the mesh. Edited meshes can be exported back to Alias Design as .OBJ files.

Substance Procedural Textures

Achieve a vast range of look variations with a new library of 80 Substance procedural textures. These dynamic, resolution-independent textures automatically generate bump maps and specular maps for impressive results. Designers can quickly convert textures to bitmaps to work with a standard renderer using a GPU-accelerated baking process. Dynamically editable and animatable parameters are for example: brick distribution, surface aging, and mortar thickness in a brick wall and the age, roughness, curb borders, and lane markings of a street texture.

iray Renderer

Creating realistic images has never been easier with 3ds Max Design, using the newly integrated iray® rendering technology from mental images. Another major milestone in the Rendering Revolution, iray enables designers to set up their scene, press 'render', and get more predictable, photo-real results without worrying about rendering settings— similar to a 'point-and-shoot' camera. Designers can focus on their creative vision as they intuitively use real world materials, lighting, and settings to more accurately portray the physical world; iray progressively refines the image until the desired level of detail is achieved. iray works with standard multi-core CPUs—however, NVIDIA CUDA-enabled GPU hardware will significantly accelerate the rendering process.

Stylistic Rendering

Create a variety of non-photorealistic (NPR) effects that help simulate artistic styles created by hand, with the new ability to render stylized images in the viewport and with the Quicksilver renderer. The looser, more abstract style of NPR imagery helps designers and architects more effectively communicate their core design intent while deemphasizing distracting or incomplete design details.

Civil View

Enjoy automated iterative workflows between AutoCAD Civil 3D and 3ds Max Design with the Civil View (formerly Dynamite VSP) feature set. With Civil View, designers can automatically create realistic visualizations in 3ds Max Design using civil data. They can create roads complete with road markings, circulation lanes, and chevrons; place trees at random or regular offsets along the side of a road or railway; or populate a highway with moving vehicles. With the repeatable, style-based process, styles are defined once, and then applied with minimal effort to multiple iterations or projects. Civil View now offers enhanced support for the new iray and Quicksilver rendering solutions.

Sculpting and Painting Enhancements

Designers can enjoy greater control over brushstrokes and their effects on geometry, thanks to new sculpting and painting workflows. New transform brushes enable modelers to slide vertices along target surfaces, while Paint Deform brushstrokes can be constrained to a spline. Moreover, designers can now save and load brush settings to quickly toggle between favorite presets, and choose a source for the Clone brush from anywhere on the screen when painting bitmaps in the Viewport Canvas.

Other New Features

Autodesk 3ds Max Design 2012 software also includes the following key features:

mRigids Rigid-Body Dynamics

Create more compelling static, dynamic, and rag doll rigid-body simulations directly in the 3ds Max Design viewport. Leveraging the multi-threaded NVIDIA® PhysX® engine, mRigids is the first module of MassFX, a unified system of simulation solvers developed as part of the XBR initiative.

Enhanced UVW Unwrapping

Create better UVW maps in less time, with a new Least Squares Conformal Mapping (LSCM) method that helps produce unwrapped UVWs from cut seams with a single click. In addition, enhancements to existing tools, together with more streamlined workflows, help speed the entire texture mapping process.

ProOptimizer Enhancements

Designers can now optimize models faster, more efficiently, and with better results, using the enhanced ProOptimizer feature that now also offers normal and UV interpolation, together with the ability to keep high-resolution normals on the low-resolution result.

Improved Start-Up Time and Memory Footprint

Enjoy a faster start-up together with a lower memory footprint, thanks to targeted performance improvements—developed as part of the XBR initiative—that enable tools to be more intelligently loaded as required.

Autodesk Material Library Enhancements

Enhancements to the Autodesk Material Library result in greater consistency for materials imported from AutoCAD® software, improved viewport feedback, and a more intuitive user interface experience; rounded edges and other additional advanced features are also offered.

UI Enhancements

An enhanced user interface (UI) responds to dark UI color schemes, performs faster, and offers a more consistent contextual UI location and access to help.

Caddy Improvements

The Caddy in-canvas UI offers better usability, with a more predictable contextual UI location, quicker interaction, and default behavior which does not occlude the designer's selection.

For a complete review of the new features and enhancements in Autodesk 3ds Max Design 2012, view the "What's New" documentation on the 3ds Max family product center at www.autodesk.com/3dsmax-documentation.

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