

Technical What's New

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Autodesk® Alias® Product Line



Autodesk

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Purpose-built for industrial designers and creative professionals, digital modelers/sculptors, and automotive/transportation designers, the Autodesk® Alias® 2010 product line—part of the Autodesk solution for Digital Prototyping—provides a complete set of industry-leading sketching, modeling, and visualization tools for the conceptual design process, helping designers quickly bring ideas to reality in a single environment.

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Autodesk Alias software products enable designers to capture their ideas digitally and then share them with engineering teams. Fast, high-quality data integration and exchange with Autodesk® Inventor® software and other third-party CAD software enable industrial design data to be incorporated into the digital prototype. By promoting productivity and creativity, the Alias product family helps companies create superior designs, which drives superior business.

This retooled and targeted family of Autodesk Alias products includes:

- Autodesk® Alias® Design software—For consumer product designers and creative professionals who control the entire design process—from ideation to the final surfaces that are passed to engineering. Designers can rapidly develop and communicate product design concepts using sketches, illustrations, photorealistic renderings, and animations.
- Autodesk® Alias® Surface software—Offers a full set of dynamic 3D modeling capabilities that enable digital modelers to evolve concept models and scan data into high-quality production surfaces for consumer product design and Class-A surfaces for automotive design and styling.
- Autodesk® Alias® Automotive software—The de facto standard for automotive design and the choice of leading automotive styling studios throughout the world. Alias Automotive provides a comprehensive set of visualization and analysis tools for the entire shape-definition process, from concept sketches through Class-A surfacing.

In addition, the 2010 version marks a major milestone with its first release on the Macintosh® platform. New and improved functionality further helps lower barriers of adoption and increase modeling productivity and design quality.

This new release offers the following features and benefits:

- Ease-of-use and tools that help increase productivity
- Enhanced visualization functionality
- Painting and modeling improvements
- Data transfer and evaluation tools

For a summary of features and their corresponding product, please see the Features at a Glance section at the end of this document.

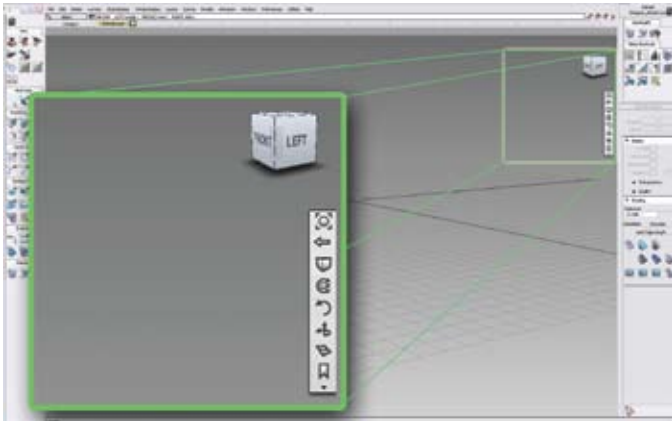
General Improvements

Available for Mac OS X

The platform choice is now up to you. In addition to Windows, the Alias product line is now available on Mac Intel® based machines running OS X 10.5 or greater with NVIDIA® based graphic cards.

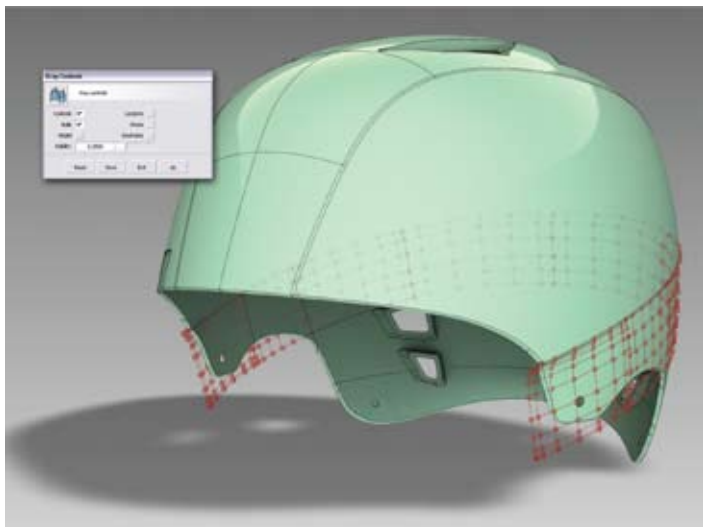
Improved Navigation

The easy-to-use Autodesk® ViewCube® navigational tool, displayed in the corner of the perspective window, provides interactive visual feedback about the current viewpoint. Click on the cube to activate preset views. The NavBar is a companion tool panel to the ViewCube and provides supplemental navigation controls, including quick access to the view twist tool, bookmark views, and for toggling between nonproportional and standard viewing.



Modeling in Shaded Mode

X-ray display enables users to be more productive by working entirely in shaded mode. Users can select and manipulate controls even if they fall behind or inside of a shaded object. X-ray display sets partial transparency of elements, including wireframe, controls, manipulators, and locators.



Full Screen Display

Full screen display allows users to customize the visibility of user interface elements, enabling the interface to meet different needs, such as presenting directly from Alias or optimizing the workspace. Options now support all major user interface elements, including the control panel.

More Power to Bookmarks

Bookmarks are a powerful method of organizing important views and annotating on top of 3D data. The addition of shelf sets expands the power of the feature by enabling users to better manage larger sets of views, which subsequently improves the ability to publish snapshots and provides a mechanism for capturing annotations from different design reviews. Users can now import bookmarks and also have explicit control of displaying just the camera view or all the shading and display settings captured with the bookmarks.



Visualization

Material Library

The new material library offers a comprehensive collection of preset shaders and contains more than 250 common materials and textures, featuring categories such as plastic, wood, glass, and metal. The library helps increase productivity and eliminates the need to build shaders from the ground up. Each material is designed for realism, improving visual results for casual users and visualization experts alike.



Alias and Showcase Workflows

Common material descriptions from the material library help preserve visual continuity when moving data from Alias to Autodesk® Showcase® software.

Decorate Models More Quickly

The Apply Shader tool simplifies the workflow for assigning shaders to objects by consolidating the key tools needed to decorate a model. With an interface that appears directly at the cursor point, users switch between shading functions and different modes of assigning shaders. The Apply Shader tool makes material set up more fluid and efficient, keeping the focus on the task at hand.



High-Quality Visual State Presets

The Diagnostic Shading panel introduces Visual States, new presets that automatically turn on environment and shade settings. The Visual States are customizable, ensuring that users can have access to three distinct shaded conditions, increasing flexibility and quality for visualizing data.

Painting

Dynamic Project Sketch Workflow

Produce more design ideas in less time by combining 2D illustrations and graphic elements on simple 3D models. The Project Sketch feature allows users to imply detail without having to model it, thus utilizing the best of 2D and 3D to create a sketch model that captures intent. Project Sketch now updates dynamically, so any changes made to the canvas are reflected directly on the projected textures. This enables the use of the 2D Layer Editor to store different variations.



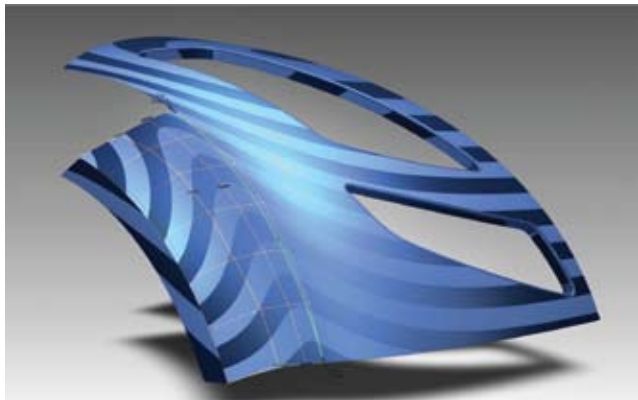
Modeling

Productive Modeling of Symmetric Objects

This new workflow for modeling can significantly reduce the time and risk of creating perfectly symmetrical curves and surfaces. Unlike symmetry using the 3D Layer feature, this tool works directly on the actual geometry using construction history. Easily assign this behavior to models anywhere in 3D space, so it is not restricted to working across the centerline.

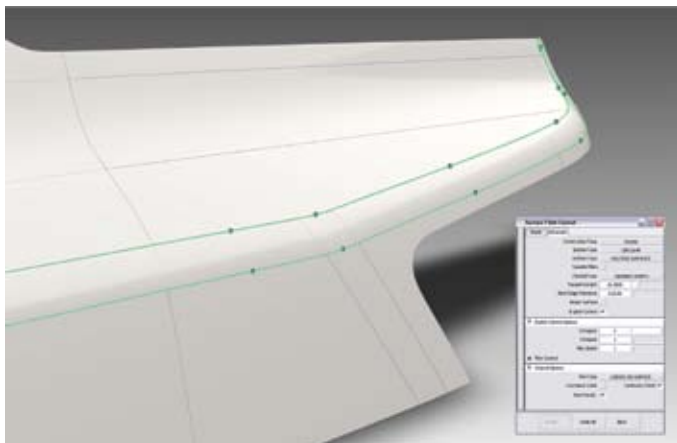
Align Enhancements

The new Align Enhancements enable users to more easily achieve the professional results associated with Class-A surfacing. The tool is optimized for direct modeling workflows and offers best-in-class control over CV placement and continuity. enhancements include refined positional influence, tangent balancing, automatic partial alignment, and improved alignment to trimmed edges. The tool now also features manipulator handles that allow for direct scaling and positioning of edges and hulls.



Surface Fillet Enhancements

The Surface Fillet manipulators used for indicating the build direction and adjusting variable fillets have been enhanced and are now easier to use and modify. Chordal fillets can now be constructed by the tangent or chord length. These additions allow users greater control to help achieve superior filleting results.



Advanced Capabilities for Extending Surfaces

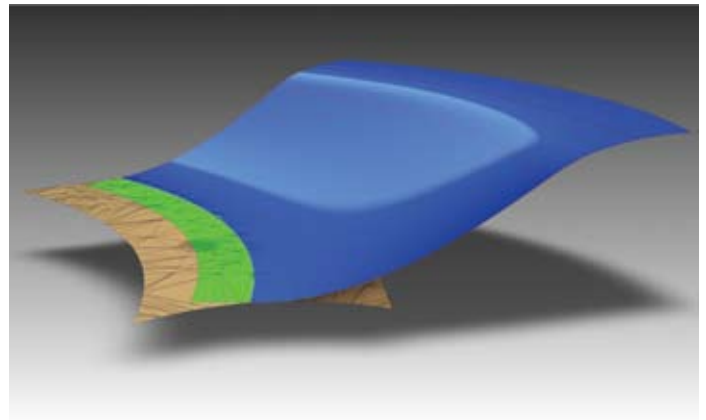
The Extend tool now allows for more flexibility by introducing the addition of nonproportional modification. Manipulators on the surface edge allow for dynamically extending proportionally and nonproportionally with improved ease of use and feedback. You can also set the condition to select two opposite edges and extend both at the same time.

Increased Efficiency with Trim Convert

Converting trimmed surfaces to natural boundary surfaces is a repetitive task essential for many technical surfacing workflows. Trim Convert can provide massive productivity gain for all users who rely on this tool. Now, any four-sided trimmed surface can be converted without the need to project a curve on surface in order to trim, helping to dramatically speed up the workflow of this simple tool.

Robust Mesh Collar Workflow

Mesh Collar is very important for hybrid modeling workflows and reduces the need to reverse engineer the entire scanned data. The enhanced collar surface quality and feedback via a color deviation map make it easier to build surfaces that match the shape of the mesh.



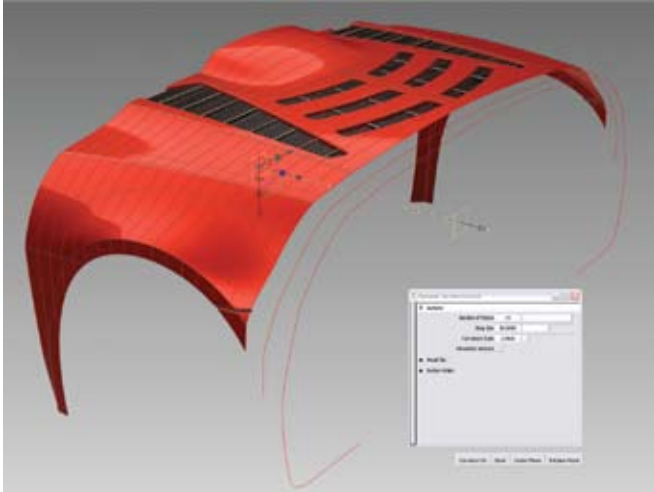
Integrated Color Deviation Feedback

The addition of color deviation feedback to key tools improves the interaction of mesh reduce and smooth workflows.

Evaluation

Dynamic Section Tool

The Dynamic Section tool provides better interactions to slice through a model with curve or visual sections to meet engineering requirements. With visual clipping planes, users can quickly review or document inner details and perform comparisons between design and engineering data while in shaded view.



Check Model Tool

When using the Check Model tool, users can now select preset construction settings at any time throughout the design process. This tool allows CAD managers to validate that the Alias data will always be checked against the correct CAD requirements.

Data Transfer

Collaboration with DWF Alias can now export models for viewing with the free Autodesk® Design Review*application. The DWF™ export supports curves, surfaces, and symmetry layers.

Simplified Rapid Prototyping Output

Alias accelerates the workflow to create watertight rapid prototypes. A wizard effectively guides users through stitching, mesh tessellation, and the creation of wall thickness to quickly output STL or color ZPR files. (ZPR is available on windows only).



Stay Up to Date

Autodesk offers you more. Gain access to technical expertise, utilize training and support programs direct from Autodesk, stay up to date with the latest product releases, and give us your feedback. Not only does Autodesk want to help you use the Autodesk Alias line of products more effectively, but we want to make sure our products are working effectively for you.

Subscription

Log in to the Subscription Center to receive product updates, log and view support requests, or take eLearning courses. A valuable component of Autodesk® Subscription, eLearning provides a continually expanding curriculum of short training exercises.

Feedback

Autodesk Alias customers can interact with the Autodesk Alias development team through several avenues. For example:

- Provide tips or join newsgroups at aliasdesign.autodesk.com
- Keep up to date on what is happening in your Industry, stay in touch with other industry professionals, and take advantage of a host of online resources at the Autodesk Alias Design Community Portal at aliasdesign.autodesk.com
- Talk with your Autodesk Authorized Reseller and support staff

Your input is crucial to our success, and we look forward to receiving your comments.

Conclusion

We thank you for your continued support of the Autodesk Alias product line—Autodesk Alias Design, Autodesk Alias Surface, and Autodesk Alias Automotive—and hope you feel we are listening to your needs. We hope that the new and enhanced product functionality will help make you more productive, your company more competitive, and return true value to your bottom line.

Features at a Glance

The following table indicates by product the new and enhanced features in the 2010 release.

Feature	Alias Design	Alias Surface	Alias Automotive
General			
Available on Mac OS X	•	•	•
Improved Navigation	•	•	•
Modeling in Shaded Mode	•	•	•
Full Screen Display	•	•	•
Bookmark Enhancements	•	•	•
Visualization			
Materials Library	•	•	•
Alias/Showcase Workflows	•	•	•
Decorate Models	•	•	•
Visual State Presets	•	•	•
Painting			
Dynamic Project Sketch Workflow	•		•
Modeling			
Productive Modeling of Symmetric Objects		•	•
Align Enhancements	•	•	•
Surface Fillet Enhancements	•	•	•
Advanced Capabilities for Extending Surfaces	•	•	•
Converting trimmed surfaces		•	•
Mesh Collar Workflows		•	•
Integrated Color Deviation Feedback		•	•
Evaluation			
Dynamic Section Tool		•	•
Check Model Tool	•	•	•
Data Transfer			
Collaboration with DWF	•	•	•
Simplified Rapid Prototyping Output	•	•	•