

**Autodesk®**  
Alias® Design

Inspire with your  
designs.



Autodesk®

# Innovate Ahead of the Curve

Style, form, and function all influence a consumer’s choice of products. Create the innovative designs consumers want—faster than your competition. Use Autodesk® Alias® Design to experiment with ideas, rapidly iterate concepts, and refine winning details.



### Unleash Creativity

Combine creativity with craftsmanship, capturing inspirational forms using the powerful tools in Autodesk® Alias® Design software. It helps you design innovative consumer product models, addressing the unique creative requirements of the industrial design workflow. Alias Design powers your creative process with industry-leading sketching, modeling, and visualization tools. Using Alias Design, you can bring ideas to reality in a single software environment, in less time.

### Capture and Communicate Design Intent

Tell your story clearly and persuasively—help team members and customers understand your design intent. Alias Design provides a complete set of tools for producing innovative designs and communicating concepts to others. It helps reduce the time required to create high-quality imagery for clear, efficient, and effective communication. As a result, design review decisions are made quickly, and projects progress seamlessly.

### Own the Design

Alias Design helps you maintain design integrity throughout the product development process. It provides tools for efficiently refining model details and creating production-quality data for downstream use. You own designs and incorporate changes later in the process, increasing the flexibility of design decisions and preventing loss or alteration of design intent during the engineering phase. Alias Design helps designers and engineers collaborate effectively, ensuring that designs address both aesthetic and functional requirements.

### Specialized Design Tools

Alias Design unleashes innovation with features that support problem solving and experimentation. An enhanced set of tools for sketching, illustration, and image editing and functionality meets the requirements for:

- Concept exploration
- Design modeling
- Visualization and communication
- Productive environment
- Process integration

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Backpack for Funsports by novakonzept

# Concept Exploration

Pursue innovative, improved solutions to the challenges in your design brief. Autodesk Alias Design software helps you explore alternatives, experiment with ideas, and solve problems.

The concept development phase demands close collaboration between designers and engineers to produce concepts that are new, yet technically feasible.

## Complete Sketching and Illustration Toolset

Capture and communicate ideas freehand without switching applications. Alias Design has the tools you need—including pencils, paintbrushes, airbrushes, markers, erasers, and special texture and effects brushes—for quick sketching, illustration, and image editing.

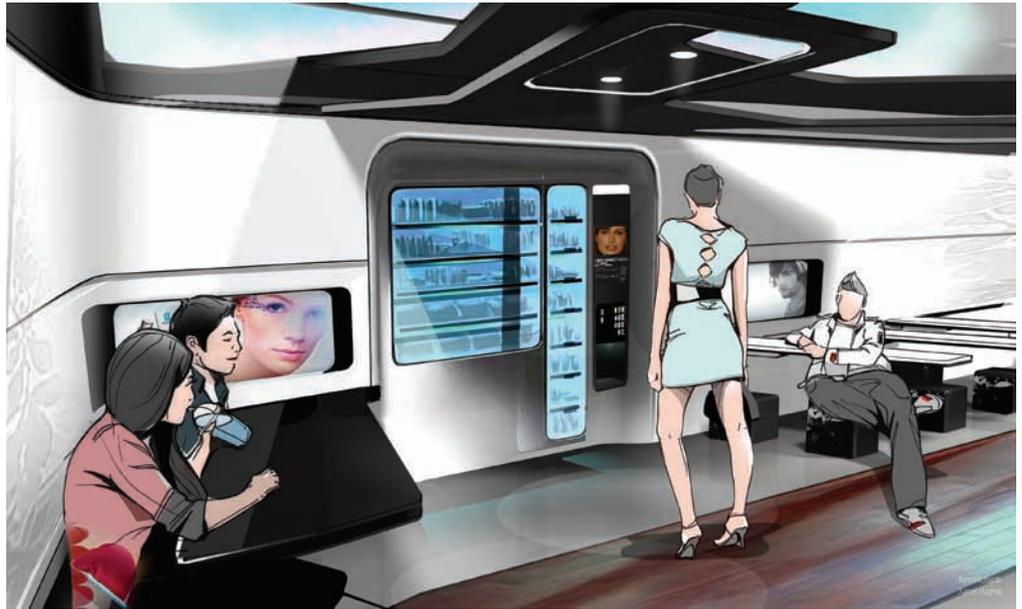


Image courtesy of H.O.T Project - Aaron Hughes and Kevin Richards

# Concept Exploration

## Customizable Paint User Interface

At startup, customize your sketching and illustration user interface, and enjoy a simpler, more efficient workflow. Use paint mode to transition smoothly from other 2D tools to Alias Design software. Alias Design speeds your work by giving you instant access to common brush controls, through a dynamic hot-spot interface that appears directly under the cursor. Hot spots combine common key functions, so you access the keyboard less often—and enhance your focus on the task at hand.



## Advanced Sketching Tools

Draw symmetrical objects quickly and get instant feedback on a drawing's proportions. The interactive symmetric drawing feature lets you duplicate symmetric brush strokes bilaterally or radially. Capture perfect lines, circles, and ellipses with predictive strokes.

## Integrated 2D/3D Environment

Create sketches at real-world scale, and draw over imported 3D CAD data to ensure design feasibility. Take advantage of the flexibility of Alias Design—sketch what's hard to model and model what's hard to sketch.



## Image Editing and Modification

Create design variations easily. A full suite of color adjustment tools lets you tweak colors and explore color alternatives. Alias Design provides deform and warp tools to alter the proportion or character of an image, and modification tools to make subtle corrections or radical changes quickly and easily.



# Design Modeling

Refine your 3D models through a creative, iterative process—evolving concepts from ideas to reality.

## Flexible Modeling

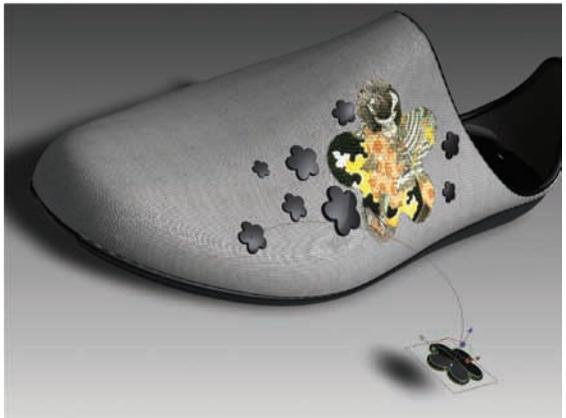
Take advantage of a range of product modeling techniques to visualize any form. Autodesk Alias Design software combines fast, repeatable curve-based modeling tools with the ability to directly sculpt 3D models.



## Dynamic Shape Modeling

Experiment with shapes at any stage of the design process. Quickly manipulate your model, exploring variations on 3D forms without rebuilding geometry, or make real-time modifications in design reviews.

- Shape objects dynamically with these powerful tools:
- Lattice Rig—Sculpt geometry by manipulating a customizable lattice created around an object.
  - Bend—Bend geometry using a curve to control deformation.
  - Twist—Twist geometry around a single-axis curve.
  - Conform—Conform geometry to the shape of another surface.



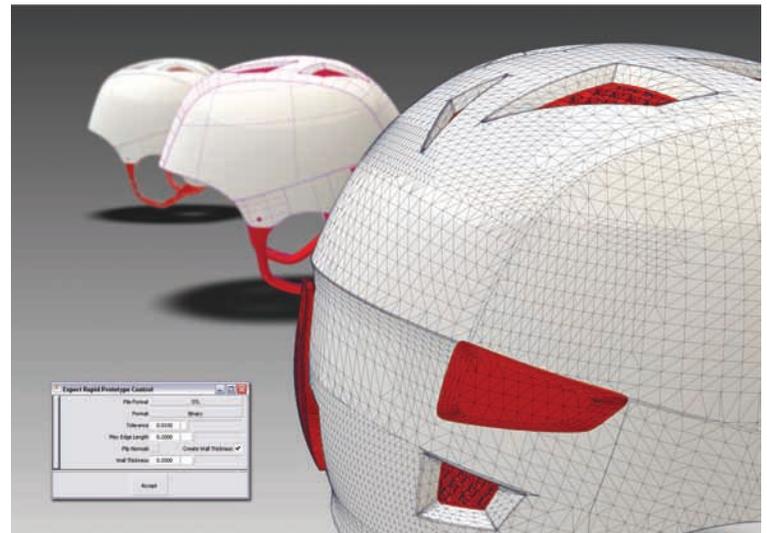
## Duplicate Place

Create repetitive geometry that follows surface contours. Edit geometry, duplicate it based on history, and place it onto other geometry.



## Rapid Prototyping

Build physical prototypes more efficiently from digital models. With rapid prototyping, you can develop and refine designs before committing to production. Print in 3D using STL output for stereolithography, and export data to computer numerical control (CNC) machines. Alias Design supports 3D printing in color.



# Design Modeling

## Surface Creation Tools

Maintain positional, tangent, or curvature continuity with surrounding surfaces for high-quality results that are ready for manufacturing. The surface modeling tools in Alias Design accelerate the process of creating high-quality surfaces.



## CAD Evaluation

Verify the quality of created surfaces, including curvature and radii analysis, to help ensure that geometry can be used by downstream CAD products such as Autodesk Inventor, and meets manufacturing requirements.

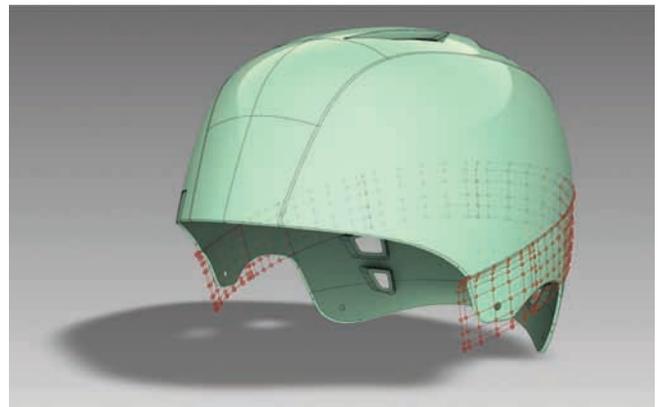
## Semiautomated Modeling Tools

Create the type of clean, complex surface results that satisfy engineering requirements and reduce the time required to add finishing details to a design model. For example, create a fillet and an accompanying flange in a single operation.



## 3D Sculpting

Sculpt surfaces by adjusting surface control vertices. You can use curve-based tools to define a shape at its edges, and direct modeling to adjust the shape at any point. With Alias Design you maintain complete control, achieving the exact form and surface quality you need.

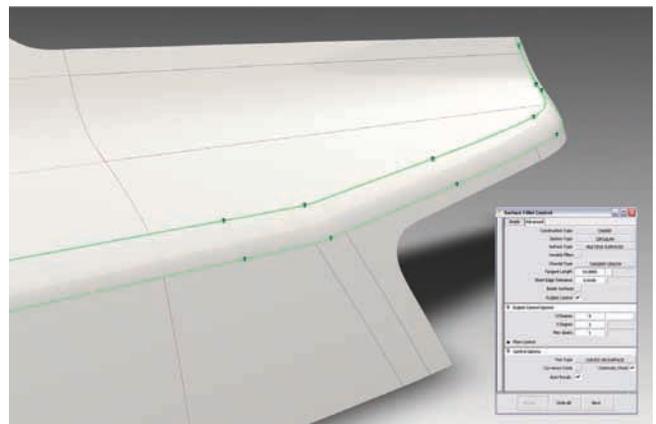


## Align Tool

Cleanly and accurately align surfaces and curves for quality surface modeling. The Align tool provides a focused, intuitive interaction that is supported by a new math capability that delivers optimal surface construction.

## Surface Fillet

Accurately create aesthetic fillets, even through trimmed surface sets. Makes the fillet process faster and easier to repeat.



# Visualization and Communication

Communicate your design intent—bring your ideas to life. Help team members and customers understand and visualize designs, so they can easily evaluate design options.

## Interactive Shading

Use shading models to increase realism and to evaluate surfaces and design forms. Autodesk Alias Design software reduces the need for time-consuming renderings with immediate visual feedback. The software supports material color, texture, glow, incandescence, bump, and displacement, and lets you quickly verify surface conditions such as curvature maps, zebra stripes, and draft angles.



## Ambient Occlusion

Render shading based on an omnidirectional light source to create general areas of shadow on models. Ambient occlusion, crucial to creating realistic environments with ambient lighting, provides soft shading similar to that of other complex, indirect lighting techniques.

## Image-Based Lighting (IBL)

Use high dynamic range imaging (HDR) as the light source for interactive visualization and rendering. The result is more realistic images for evaluating, presenting, and marketing designs.



## Compelling Output

Get high-resolution images without a full software rendering. With Alias Design, you can instantly save high-resolution images of any modeling window. Compose images that display wireframes, canvas planes, or fully shaded models to create turntables or 360-degree interactive QuickTime® VR files.

## Software Rendering

Photorealistic rendering capabilities in Alias Design let you create images for print, video, or interactive presentations. Alias Design raycast and ray-trace renderers incorporate ambient occlusion calculations (soft shadows) and HDRI support for added realism.



# Visualization and Communication

Communicate your design intent—bring your ideas to life. Help team members and customers understand and visualize designs, so they can easily evaluate design options.

## Animation

Create dynamic designs that show design functionality, without building a working prototype. With animation features, you can make object properties such as position and color change over time; display these properties in real time or as rendered images. Alias Design lets you create repetitive geometry that follows surface contours, and place geometry onto other geometry.

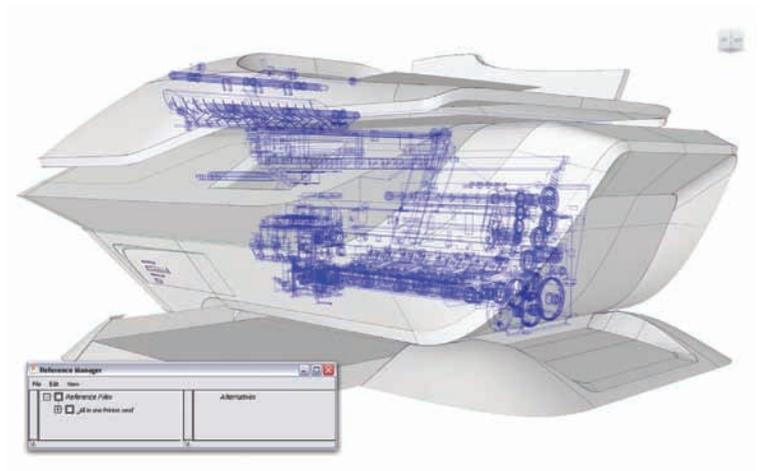
## Annotation Tools

Evaluate and review designs with ease. Take advantage of your entire screen space, working with only necessary interface aspects. Alias Design provides a full set of annotation tools including bookmarks, full-screen capabilities, and pencils and markers.



## Reference Data Workflow

Generate and compare an unlimited number of design variations for engineering and design reviews. The Reference Manager lets teams review massive amounts of 3D geometry and interact directly with detailed digital models.



# Productive Environment

It's never been easier to learn quickly and work more efficiently. The intuitive user interface of Autodesk Alias Design shortens the learning curve and speeds your workflow.

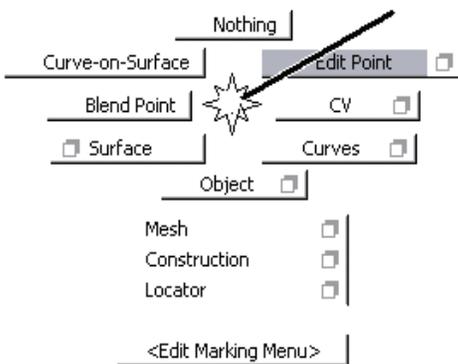
## Unified Shading Environment

Click through tasks faster with task-centric marking menus that reduce the use of dialog boxes. You can choose materials and assign shaders directly on surfaces with only a few clicks.



## Marking Menus

Quickly select commands without looking away from the design. Patented marking menus let you use context-sensitive gestures to select commands.

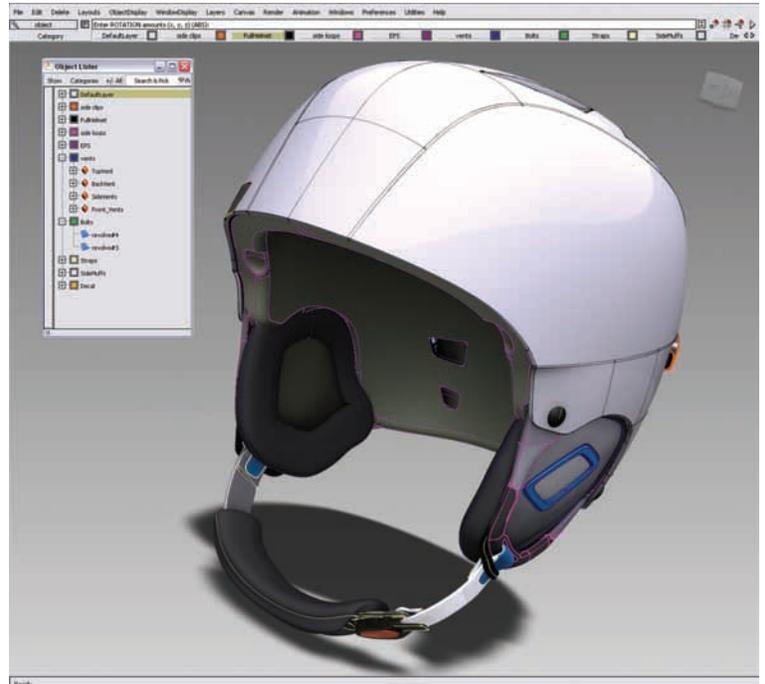


## Customizable Interface

Customize your user interface—including hotkeys, tool displays, and marking menus—to suit any workflow.

## Data Organization

Improve workflow and performance by organizing work and speeding navigation through complex models. Alias Design helps you categorize and organize model components into layers, for more efficient navigation.



## Mac OSX Operating System

Use Alias Design 64-bit on your Apple® Mac®.

## Windows Vista Support

Use Alias Design 32-bit or 64-bit with Microsoft® Windows Vista®.

# Process Integration

Exchange data with CAD software throughout the design process. Sketch and model over imported engineering data. And when your model is approved, protect design integrity in the engineering phase by exporting data to engineering packages.



## Data Exchange

Exchange digital design data with engineering teams using fast, high-quality CAD translators for industry-standard data formats such as DXF™, IGES, and STEP.

## Data Exchange with Autodesk Manufacturing Products

Exchange data with mechanical design and engineering products, such as Autodesk® Inventor® software, using the industry-leading DWG™ data format. The Alias Direct Reader add-in for Inventor software makes it possible to directly read a native Alias.wire file in Autodesk Inventor; the translator reads surfaces, shells, solids, and curves from the .wire file. Autodesk Alias Design also directly reads native Autodesk Inventor data.

## DirectConnect Data Translators

Integrate Alias Design into your development pipeline by exchanging data bidirectionally with CAD software packages such as CATIA®, UGS® NX, Pro/ENGINEER®, PTC Granite®, JT, and SolidWorks®.

## Model Verification

Test geometry created in Alias Design to predict and diagnose problems when transferring to CAD systems such as Autodesk Inventor, Solidworks, and Pro/ENGINEER.

## DWF File Format—New

Create DWF™ files from Alias Design data with a single click. DWF protects the integrity of a design and allows for precise publishing, rendering, and printing of even the most complex digital models.

# Autodesk Alias Product Line

The Autodesk® Alias product line, part of the Autodesk solution for Digital Prototyping helps optimize the creative design process with industry-leading sketching, modeling, and visualization tools that help you quickly realize ideas in a single environment. The product family includes Autodesk® Alias® Design, Autodesk® Alias® Surface, and Autodesk® Alias® Automotive.

## Autodesk® Alias® Product Line

### Autodesk Alias Design

Autodesk® Alias® Design, part of the Autodesk solution for Digital Prototyping, is for consumer product designers who control the entire design process—from ideation to the final surfaces that are passed to engineering. It enables designers to rapidly develop and communicate product design concepts using sketches, illustrations, photorealistic renderings, and animations.

### Autodesk Alias Surface

Autodesk® Alias® Surface software, part of the Autodesk solution for Digital Prototyping, offers a full set of dynamic 3D modeling capabilities that enable virtual 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

Autodesk® Alias® Automotive software, part of the Autodesk solution for Digital Prototyping, is an industry-leading application for automotive design and styling and the choice of leading automotive styling studios throughout the world. The software provides a comprehensive set of visualization and analysis tools for the entire shape-definition process, from concept sketches through Class-A surfacing.

Task	Deliverables	Product
Creation and Communication of Design	<ul style="list-style-type: none"> <li>• Sketches</li> <li>• Illustrations</li> <li>• 3D concept models</li> <li>• Production models</li> <li>• Rapid prototypes</li> <li>• Visualization</li> <li>• Animation</li> </ul>	Autodesk® Alias® Design
Advanced Surfacing and Reverse Engineering	<ul style="list-style-type: none"> <li>• Scan data</li> <li>• Class-A surfaces</li> <li>• Reverse engineering</li> <li>• Advance evaluation</li> <li>• Rapid prototypes</li> <li>• Visualization</li> </ul>	Autodesk® Alias® Surface
Transportation Design	<ul style="list-style-type: none"> <li>• Scan data</li> <li>• Modified scan data</li> <li>• Class-A surfaces</li> <li>• Reverse engineering</li> <li>• Advance evaluation</li> <li>• 3D concept models</li> <li>• Rapid prototypes</li> <li>• Visualization</li> <li>• Sketches</li> <li>• Illustrations</li> <li>• Animations</li> </ul>	Autodesk® Alias® Automotive

