



solidThinking Evolve® allows designers to develop forms faster, using either Windows or OS X. It enables the capture of an initial sketch, exploration of styling alternatives, and visualization of products with realistic renderings generated in real time. Evolve provides organic surface modeling, parametric solid controls, and polygonal modeling with NURBS-based surfaces and solids and a unique ConstructionTree™ history feature. It frees designers from the constraints of traditional CAD tools, while allowing the export of digital models required by others in the product development process.

Product Highlights

- Hybrid modeler with organic surface modeling, solid surfacing, and polygonal modeling
- Unlimited construction history provides real-time updates when modifications are made to parameters or surfaces
- Real-time photo realistic rendering
- Available on both Windows and Mac

Benefits

Model Freely

Created by designers for designers, Evolve provides free form surfacing, solid modeling, and polygonal modeling in a single package. This allows the best approach to be applied to each aspect of a design. Evolve allows users to mix and match modeling techniques on the fly without any additional plugins.

Make Changes Effortlessly

The ConstructionTree history allows users to edit a point or a parameter and then let Evolve automatically update the entire model. Typically surface modelers require the recreation of an entire model to accommodate a dimensional change.

Render Beautifully

Quickly test and evaluate designs, materials, or environments in real-time while developing your model. Evolve offers users the ability to create photorealistic images and animation with a built-in renderer.

Capabilities

Best-in-class Construction History

- Unlimited construction history provides real-time updates when modifications are made to parameters or surfaces.
- Browse the graphic representation of the construction history to identify and select source objects within the history tree with immediate reconstruction.
- Manipulate both the parameters and points of all objects freely. Never forget the steps involved in construction - the entire tree is saved inside the file and is accessible at any time.
- Thanks to the possibility to freely manipulate your models, you can easily experiment with new shapes and improve your creativity.

Advanced NURBS Modeling

Evolve uses NURBS (Non Uniform Rational B-Splines) as its geometry type. This curve and surface definition method offers the

Learn more:
altairhyperworks.com/evolve



Set of glasses modeled and rendered in Evolve



Bike with optimized frame



Diamond ring rendering

greatest flexibility and precision. NURBS are capable of representing any desired shape, both analytic and free form, and their algorithms are extremely fast and stable. Full NURBS-based modeling, construction history, and the most advanced modeling tools make Evolve a matchless tool for designers.

Polygonal Modeling and Subdivision Surfaces

Evolve also features an advanced polygonal modeler with support of n-side polygons. It is possible to create and extrude polygons, split faces and edges, refine, decimate, and perform many other operations. The unique implementation of interactive subdivision surfaces with construction history gives the user maximum power for refinement and smoothing of polygonal meshes.

Reverse Engineering

- Fit points - Create a surface from a point cloud data set.
- PointCloud from object - Create a PointCloud given a surface.
- Planar Clouds from PointCloud - Creates a specified number of points clouds lying on parallel planes from a given points cloud. This command can be useful to simplify a points cloud derived from 3D scanning.

Beside a section planes direction, the user can specify either the number of planes, or the distance between planes.

- Curve from PointCloud - Creates a curve from a point cloud. This tool creates a curve starting from a selected point and approximating the points ordered by minimal distance.

Real-Time Photo Realistic Rendering

Take advantage of a truly comprehensive rendering system integrating all industry-leading rendering techniques. The most efficient memory management functions, unlimited output resolution, as well as multi-threaded and multi-processor renderings makes Evolve the perfect tool for generating photo realistic images. Real-time rendering further improves interactivity during the review and visualization phases of design.

Animation

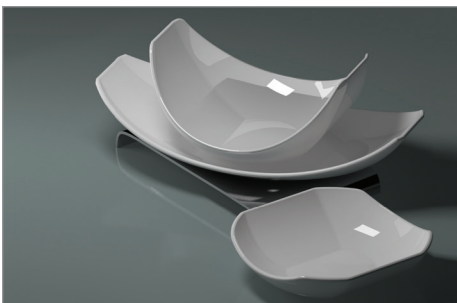
Take your design presentations to the next level by creating photo realistic animations. Create videos or Quicktime VR movies to communicate complex ideas, or import H3D files to produce stunning simulations.

Direct Import

- 3ds
- ACIS
- Adobe Illustrator
- CATIA (V4 & V5 & V6)
- DWG
- DXF
- H3D
- I-DEAS
- IGES
- Inventor
- NX
- OBJ
- Parasolid
- Point cloud
- Pro/E
- Rhinoceros
- SolidWorks
- STEP
- STL
- VDAFS

Export To

- 3ds
- ACIS SAT
- DXF
- IGES
- Keyshot
- LightWave
- Maya ASCII
- OBJ
- Parasolid
- Rhinoceros
- STEP
- STL
- VDAFS
- VRML



Dish set designed by Diane Shane-Schuldt



Electric motorbike concept



Perfume bottle concept