

"Every day, I learn some new feature about Rhino. It keeps reinforcing how brilliant your team is. Wow!"

Richard Lin
E.S.P. Video & Graphics

"Whoever wrote this package has done a fantastic job."

Ken Kell, Sr. Mold Designer
Oreck Tooling Services

"It's a perfect companion to 3D Studio MAX."

Rune Spaans
Innerloop Studios

"After a few years of mostly drafting and a little modeling, Rhino is quite refreshing. The interface is a great combination of features I'm already familiar with in AutoCAD and MAX."

Michael O'Meara
Dept. of Architecture
Rhode Island School of Design

"Rhino support is 10 times better than anything else I have seen. I am truly impressed."

Jon Coing
University of Alabama

"When it comes to high-end NURBS modeling, no other package for the price comes within a light year of Rhino."

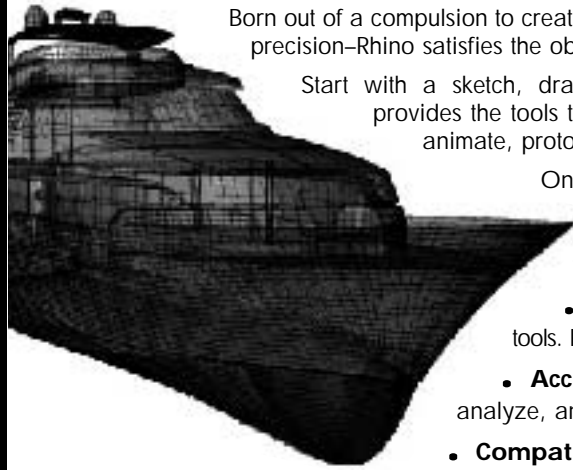
DCC Magazine
February 1999

"If every industrial designer, animator, and architect doesn't consider Rhino for 3-D free-form modeling, then they are missing a fantastic tool that also happens to be a terrific value for the money. You don't get much better than that."

CAD User Magazine
December 1998

"Primo! A powerful tool for your creative arsenal. Buy it. Use it!"

Digital Video Magazine
June 1999



Born out of a compulsion to create, a fascination with free forms, and a passion for precision—Rhino satisfies the obsession to dream, explore, and design in 3-D.

Start with a sketch, drawing, physical model, or only an idea—Rhino provides the tools to accurately model your design—ready to render, animate, prototype, analyze, draft, and build.

Only imagination and an ordinary Windows PC are needed. Rhino is a NURBS* 3-D modeler for Windows 95/98/2000/NT with unique features:

- **Free-form 3-D** curve, surface, and solid modeling tools. Rhino can model almost any shape imaginable.
- **Accuracy** needed to design, prototype, engineer, analyze, and manufacture anything from aircraft to jewelry.
- **Compatibility** with your other design, drafting, CAM, engineering, analysis, rendering, animation, and illustration software. Direct 3-D digitizer support.

- **Accessible.** So easy to learn and use that you can focus on design and visualization without being distracted by the software.
- **Fast**, even on an ordinary laptop computer. No special hardware is needed.
- **Support** and training available around the clock and around the world.
- **Affordable.** You can afford to put a copy on everyone's desk.

CONSIDER RHINO, IF...

You're still working only in 2-D and don't want to be left behind.

You need to design—not think about software.

Your current modeling software is too inaccurate for manufacturing.

You would like to control your design all the way through production. Start by controlling the model.

You need access to many different file types to complete your project.

Your designs are stifled by your software tools.

You need better free-form modeling tools that work with your other software.

You don't like to spend so much money on software, maintenance, and support each time you hire another designer.

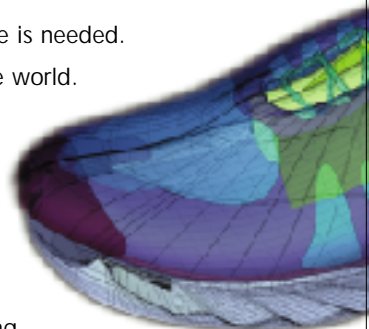
You need 24-hour-a-day, 7-day-a-week online support.

You need to capture a physical model onto the computer.

You want direct access to the developers of the software.

You would like to buy software that has been field tested by more than 100,000 users before it was first released.

You would like to doodle in 3-D anywhere you might be.



ENCOUNTER RHINO ON YOUR TERMS.

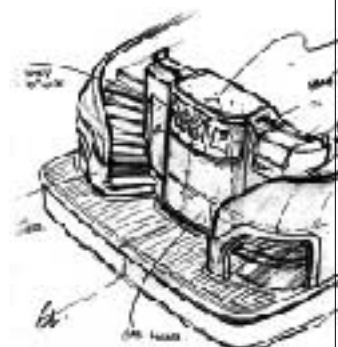


- Visit www.rhino3d.com for English
- www.it.rhino3d.com for Italian
- www.fr.rhino3d.com for French
- www.es.rhino3d.com for Spanish
- www.de.rhino3d.com for German

- Browse the gallery.
- Study the specifications.

- Read what users say about Rhino. Check out some of their projects.
- Download Rhino, try the tutorials, and put Rhino to work
- Take advantage of the worldwide support and training.

*NURBS, Non-Uniform Rational B-Splines, are mathematical representations of 3-D geometry that can accurately describe any shape from a simple 2-D line, circle, arc, or curve to the most complex 3-D organic free-form surface or solid. Because of their flexibility and accuracy, NURBS models can be used in any process from illustration and animation to manufacturing.



Hardware requirements

Rhino runs on ordinary Windows desktop and laptop computers.

- Pentium or higher processor.
- Windows 95/98/2000/NT for Intel 2000.
- (Rhino will not be ported to other operating systems.)
- 20 MB disk space.
- 32 MB RAM. More is recommended.
- IntelliMouse recommended.
- 3-D digitizer optional

Rhino also runs on Apple MACs with Virtual PC.

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DESCRIPTION

Rhino can create, edit, analyze, and translate NURBS curves, surfaces, and solids in Windows. There are no practical limits on complexity, degree, or size.

FEATURES

User interface

- unlimited viewports
- shaded working views
- perspective working views
- synchronize views
- pop-up recently used commands
- customizable icons and user workspace
- Customizable pop-up toolbar
- Explorer-like help
- newsgroup support
- 550-page color manual

Construction aids

- unlimited undo and redo
- undo and redo multiple
- object snaps
- grid snaps
- ortho mode
- next and previous construction planes
- orient construction plane on curve
- layers
- background bitmaps
- object hide/show
- swap hidden objects
- object lock/unlock
- unlock selected objects
- control and edit points on/off
- points off for selected objects

Create curves

- point
- line
- polyline
- polyline on mesh
- free-form curve
- free-form curve on surface
- circle
- arc
- ellipse
- rectangle
- polygon

- helix
- spiral
- conic
- control points (vertices)
- sketch
- sketch on surface
- sketch on mesh

Create curves from other objects

- extend
- fillet
- chamfer
- offset
- blend
- intersection
- contour
- section
- border
- silhouette
- project
- wireframe
- 2-D drawings

Edit curves

- control points
- edit points
- smooth
- change degree
- add/remove knots
- rebuild
- match
- simplify
- change weight

Create surfaces

- from 3 or 4 points
- from 3 or 4 curves
- from planar curves
- from network of curves
- rectangle
- deformable plane
- extrude
- loft
- developable
- sweep along a path
- sweep along two rail curves
- revolve
- rail revolve
- blend
- patch
- point grid
- heightfield
- fillet

- chamfer
- offset
- TrueType text

3-D digitizing

- MicroScribe
- Faro

Edit surfaces

- control points
- change degree
- add/remove knots
- match position, tangency, or curvature
- extend
- merge
- join
- untrim
- split surface by isoparms
- rebuild
- shrink
- make periodic
- Boolean (union, difference, intersection)
- unroll developable surfaces

Create solids

- box
- sphere
- cylinder
- tube
- pipe
- cone
- ellipsoid
- torus
- extrude planar curve
- extrude surface
- cap planar holes
- join surfaces

Edit tools

- cut
- copy
- paste
- delete
- move
- rotate
- mirror
- scale
- stretch
- array
- join
- trim

- split
- explode
- extend
- fillet
- chamfer
- offset
- twist
- bend
- orient planar object on curve
- project
- object properties

Edit solids

- fillet edges
- extract surface
- Boolean (union, difference, intersection)

Annotation

- arrows
- dimensions
- hidden line removal

Edit meshes

- explode
- join
- reduce polygons

Analysis

- point
- length
- distance
- angle
- radius
- area
- area centroid
- area moments
- volume
- volume centroid
- volume moments
- curvature graph
- surface curvature
- geometric continuity
- deviation
- naked edges
- nearest point
- surface analysis (draft angle, zebra stripe, environment map)
- Gaussian curvature, mean curvature, and minimum or maximum radius of curvature)

- hydrostatics

File management

- notes
- templates
- merge files
- export selected
- objects

I/O plug-ins

- 3D Studio MAX
- I/O tool kit with source code

File formats

- DWG/DXF (AutoCAD 2000, 2001i, 14, 13 and 12)
- SAT (ACIS)
- X-T (Parasolid)
- 3DS
- LWO
- STL
- OBJ
- AI
- RIB
- POV
- UDO
- VRML
- BMP
- TGA
- JPG
- IGES: Alias AutoFORM CAMSoft CATIA Cosmos Delcam FastSurf, FastSHIP IronCAD LUSAS Maya MAX 3.0 Mastercam Mechanical Desktop Microstation OptiCAD Pro/E SDRC I-DEAS Softimage Solid Edge SolidWorks SURFCAM Unigraphics



Flamingo Rendering Plug-in

- Interactive radiosity and raytrace rendering
- Calculates light, shadows, transparency, diffusion, reflection, etc.
- Thousands of materials to assign to a layer or object
- Sophisticated single-frame images, panoramas and animations –walk-through and fly-by
- Two- and three-point perspective projections
- Quick raytrace rendering option and progressive-refinement rendering algorithms
- Works seamlessly inside Rhino

