

Command List

New in Rhino

Numbers



3DFace

Draw a single mesh face.



3View

Set up a three-viewport workspace.



4View

Set up a four-viewport workspace.

A



AcadSchemes

Edit AutoCAD export schemes.



AddNextU

Add the next control point in the u-direction to the selection.



AddNextV

Add the next control point in the v-direction to the selection.



AddPrevU

Add the previous control point in the u-direction to the selection.



AddPrevV

Add the previous control point in the v-direction to the selection.



AddToGroup

Add an object to a selected group.



Alerter

Open the Alerter options page.



Align

Line up bounding boxes of objects.



AlignMeshVertices

Force mesh vertices to the same location.



AlignProfiles

Line up one curve to another.



Angle



Report the angle between two picked or defined lines.



[ApplyBoxMapping](#)

Add a box texture mapping channel to an object.



[ApplyCrv](#)

Wrap a curve onto a surface.



[ApplyCurvePiping](#)

Constructs a mesh pipe display around a curve.



[ApplyCustomMapping](#)

Add a custom texture mapping channel to an object.



[ApplyCylindricalMapping](#)

Add a cylindrical texture mapping channel to an object.



[ApplyDisplacement](#)

Constructs a displacement display mesh for surfaces, polysurfaces, or meshes.



[ApplyEdgeSoftening](#)

Constructs an edge-softening display mesh for surfaces, polysurfaces, or meshes.



[ApplyMesh](#)

Fit a mesh that matches a source mesh onto a surface.



[ApplyMeshUVN](#)

Wrap meshes and points onto a surface.



[ApplyPlanarMapping](#)

Add a planar texture mapping channel.



[ApplyShutLining](#)

Constructs a shut-line display mesh for surfaces, polysurfaces, or meshes.



[ApplySphericalMapping](#)

Add a spherical texture mapping channel to an object.



[ApplySurfaceMapping](#)

Add a surface texture mapping channel to an object.



[ApplyWatermark](#)

Embed invisible watermarks in Rhino models.



[ArcBlend](#)

Create an arc blend curve between two curves.



[Area](#)

Report an object's area.





AreaCentroid

Report and marks an object's area centroid.



AreaMoments

Report an object's area moments of inertia.



Array

Copy and space objects in columns, rows, and levels.



ArrayCrv

Copy and space objects along a curve.



ArrayCrvOnSrf

Copy and space objects along a curve on a surface.



ArrayHole

Copy and space holes in rows and columns.



ArrayHolePolar

Copy and space holes around a central location.



ArrayLinear

Copy and space objects in a single direction.



ArrayPolar

Copy and space objects around a central location.



ArraySrf

Copy and space objects in rows and columns on a surface.



Arrowhead

Create or remove an arrowhead on a curve.



AssignBlankTexture

Assign texture names to objects.



AttachGHSDData

Add GHS-specific information to objects.



Autosave

Save the current model to a backup file.

B



BackgroundBitmap

Manage a background image in a viewport.



Bake



Combine an object's textures and decals into a single bitmap file and assign that bitmap as object's texture.



Bend

Deform objects along an arc.



Blend

Connect two curves maintaining continuity.



BlendCrv

Connect two curves with continuity control.



BlendEdge

Create a surface between polysurface edges maintaining continuity.



BlendSrf

Create a blend surface between two surfaces with continuity control.



Block

Define a block object.



BlockEdit

Allow selecting a block instance to change the block geometry and update the block definition.



BlockManager

Manage the block definitions.



Boolean2Objects

Cycle through possible Boolean operations between two objects.



BooleanDifference

Subtract the volume of one set of objects from another.



BooleanIntersection

Create a new solid from solids' intersected volumes.



BooleanSplit

Split and close solids at intersections.



BooleanUnion

Combine the volumes of one or more objects.



Boss

Extrude closed planar curves normal to the curve plane toward a boundary surface where the boundary surface is trimmed and joined to the extruded objects.



Bounce

Shoot a ray at a collection of surfaces to create a polyline path.



BoundingBox

Creates a polyline or solid that encloses objects.





Box

Draws a solid box.



BoxEdit

Size, scale, position, and rotate objects numerically.



BringForward

Bring curves forward in draw order.



BringToFront

Bring curves to the front in draw order.



BringViewportToTop

Bring a viewport to the front.

C



Cage

Create a control cage object used by the [CageEdit](#) command to deform other objects.



CageEdit

Deform objects smoothly using control cage objects.



Calc

Toggle the on-screen calculator.



CalcRPN

Toggle the on-screen RPN (reverse Polish notation) calculator.



Camera

Show, hide, or toggle the visibility of the viewport camera.



Cancel

Cancel the current command and deselects objects.



Cap

Fill planar openings with a surface joined to the hole edge.



Chamfer

Create a line segment between two curves and trims or extends the curves to meet it.



ChamferEdge

Create a ruled surface at polysurface edges.



ChamferSrf

Create a ruled surface between two surface edges.



ChangeDegree



Change the degree of the polynomial that defines the curve or surface by adding or subtracting control points between knot spans, while maintaining the knot structure.



ChangeLayer

Change an object's layer.



ChangeToCurrentLayer

Change an object's layer to the current layer.



Check

Report errors in an object's data structure.



CheckInLicense

Check in a license to the Zoo license manager.



CheckNewObjects

Report errors in an object's data structure as it is created or imported.



CheckOutLicense

Check out a license from the Zoo license manager.



Circle

Draw a circle from center and radius, diameter, points on the circumference, and circumference length.



ClearAllMeshes

Delete render and analysis meshes.



ClearDrawOrder

Return curve draw order to the default.



ClearUndo

Clear the undo buffer to free memory.



ClippingPlane

Create a plane that hides objects.



CloseCrv

Close open curves.



CloseRenderWindow

Close the render display window.



ClosestPt

Create a point object on an object at the nearest location to a base location or to another object.



CloseViewport

Close the active viewport.



CollapseMeshEdge

Move mesh edge vertices to a single vertex.





[CollapseMeshFace](#)

Move mesh face vertices to a single vertex.



[CollapseMeshFacesByArea](#)

Move mesh face vertices to a single vertex based on face area.



[CollapseMeshFacesByAspectRatio](#)

Move mesh face vertices to a single vertex based on face aspect ratio.



[CollapseMeshFacesByEdgeLength](#)

Move mesh face vertices to a single vertex based on face edge length.



[CollapseMeshVertex](#)

Move a mesh vertex to an adjacent mesh vertex.



[CommandHelp](#)

Open the docking context Command Help window.



[CommandHistory](#)

Open the Command History window.



[CommandList](#)

Open the Command List window.



[CommandPrompt](#)

Manage the display of the command prompt window.



[Commands](#)

Display the Command List Help topic.



[ComputeVertexColors](#)

Evaluate texture coordinates and set vertex colors.



[Cone](#)

Draw a cone.



[Conic](#)

Draw a conic section curve with options for the start, end, apex, and rho value.



[Connect](#)

Extend and trim curves to meet at their endpoints.



[ConnectSrf](#)

Extend surface edges to meet and trims the surfaces to each other.



[ContentFilter](#)

Open the Content Filter dialog box.



[ContinueCurve](#)

Continue to draw the selected curve using control points.





ContinueInterpCrv

Continue to draw the selected curve interpolating through picked points.



Contour

Create a spaced series of planar curves and points through objects.



Convert

Change a curve to polyline or arc segments.



ConvertDots

Convert *Dot* objects to either *points* or *text*.



ConvertExtrusion

Convert extrusion objects to surfaces and polysurfaces.



ConvertToBeziers

Change the structure of a NURBS object to a Bézier object.



Copy

Duplicate objects.



CopyCPlaneSettingsToAll

Match all viewports' grid and snap settings to the specified viewport.



CopyCPlaneToAll

Match all viewports' construction planes to the specified viewport.



CopyDetailToViewport

Copy a detail viewport to a model viewport.



CopyLayout

Copy the active layout to a new layout.



CopyRenderWindowToClipboard

Copy the image in the render window to the Clipboard.



CopyToClipboard

Copy objects to the Clipboard.



CopyToLayer

Copy objects to a layer.



CopyViewportToDetail

Copy or move a model viewport to a detail viewport.



CPlane

Set the construction plane in the active viewport.



CreaseSplitting

Control whether surface creation commands divide creased surfaces into polysurfaces.





CreateRegions

Replace a non-manifold polysurface with all solid manifold regions defined by the surfaces of the input.



CreateSolid

Create a closed polysurface from surfaces.



CreateUVCrv

Project a surface boundary and trim curves onto the world x-y plane.



Crv2View

Create a curve by averaging two input curves that are planar in two different views.



CrvDeviation

Report the maximum and minimum distances between two curves.



CrvEnd

Place a point object at the end of a curve.



CrvSeam

Change the seam (start/end) location on closed curves.



CrvStart

Place a point object at the start of a curve.



CSec

Create cross-section curves through profile curves.



CullControlPolygon

Toggle the display of control points that are behind the surface.



CullDegenerateMeshFaces

Delete zero-area mesh faces.



Curvature

Evaluate the curvature of a curve or surface.



CurvatureAnalysis

Evaluate surface curvature using false-color analysis.



CurvatureAnalysisOff

Turn off curvature analysis display.



CurvatureGraph

Evaluate curve or surface curvature with a graph.



CurvatureGraphOff

Turn off curvature graph display.



Curve

Draw a curve from [control point](#) locations.



[CurveBoolean](#)

Trim, split, and join curves based on their overlapping regions.



[CurveThroughPolyline](#)

Create a curve from polyline vertices.



[CurveThroughPt](#)

Fit a curve through point objects.



[CurveThroughSrfControlPt](#)

Fit curves through surface control points.



[Cut](#)

Delete objects and place them in the Clipboard.



[CutPlane](#)

Create planar surfaces through objects at specified locations.



[CutVolume](#)

Report the volume of the intersection of a solid and a box.



[Cylinder](#)

Draw a cylinder.

D



[Delete](#)

Erase objects.



[DeleteHole](#)

Delete a hole from a polysurface and remake the surface.



[DeleteMeshFaces](#)

Remove mesh faces from a mesh creating a hole.



[DeleteSubCrv](#)

Remove a portion of a curve that is between two locations.



[Detail](#)

Manage layout detail viewports.



[Diameter](#)

Report the diameter of a curve at a specified point.



[DigBeep](#)

Turn the digitizing arm sound on and off.



[DigCalibrate](#)



Validate digitizer measurements against a model.



DigCamera

Set the view based on the probe position and direction.



DigClick

Pick a location with a digitizing arm.



DigDisconnect

Disconnect the digitizing arm.



Digitize

Connect and initialize a digitizing arm.



DigLine

Draw a line normal to a surface with a digitizing arm.



DigPause

Suspend/pause input from the digitizing arm.



DigScale

Set a scale factor for digitized points.



DigSection

Create planar cross sections with a digitizing arm.



DigSketch

Sketch a curve with a digitizing arm.



Dim

Draw horizontal or vertical linear dimensions.



DimAligned

Draw a linear dimension lined up with two points.



DimAngle

Dimension the angle between two lines.



DimArea

Dimension the area of a closed curve, surface, mesh, or hatch.



DimCreaseAngle

Dimension the angle between two planes.



DimCurveLength

Dimension the length of a curve.



DimDiameter

Dimension the diameter of a curve.





DimOrdinate

Dimension the x- or y-distance from a base location.



DimRadius

Dimension the radius of an arc or circle.



DimRecenterText

Return dimension text to its default location.



DimRotated

Draw a linear dimension that is rotated from the x-y axis.



Dir

Display and edit an object's normal direction.



DirectionalLight

Insert a light with parallel rays pointing in a direction.



DisableClippingPlane

Turn off the selected clipping plane.



DisableOsnap

Manage persistent object snaps.



DisplayCommandPrompt

Re-display the command prompt.



DisplayProperties

Open the Display panel.



Distance

Report the distance between two picked locations.



Divide

Create point objects along a curve by the number of equal length segments or segments of a specified length.



DivideAlongCreases

Divide a surface into separate parts at kinks.



DocumentProperties

Manage the settings for the current model.



DocumentPropertiesPage

Open the Document Properties dialog box at the specified page.



DollyZoom

Move the camera location and change the lens length at the same time.



Domain



Report the domain of a curve or surface.



Dot

Draw an annotation dot that stays parallel to and sizes with the view.



DraftAngleAnalysis

Visually evaluate surface draft-angle using false-color analysis.



DraftAngleAnalysisOff

Turn off draft angle analysis.



DraftAnglePoint

Place a point object on a surface the surface's draft angle break location.



DragMode

Specify the plane object dragging will be parallel to.



Drape

Create a surface through the intersections of objects and points projected toward the construction plane.



DrapePt

Create a grid of points at the intersections of objects and points projected toward the construction plane.



DupBorder

Create a curve or polyline that copies a surface, polysurface, or mesh border.



DupDimStyle

Create new dimension styles by copying existing styles.



DupEdge

Create a curve that copies a surface edge.



DupFaceBorder

Create a curve that copies a polysurface face border.



DupLayer

Duplicate (copy) a layer including all layer attributes and geometry.



DupMeshEdge

Creates a polyline that duplicates the edge of a mesh.



DupMeshHoleBoundary

Create a polyline that duplicates the boundary of a mesh hole.

E



EarthAnchorPoint

Add information about the model's position for GIS mapping applications.





Echo

Turn on echoing of script commands to the command history window.



EdgeSrf

Create a surface from two, three, or four curves.



EditLightByLooking

Set a spotlight direction using view manipulation tools.



EditPtOn

Display points on the curve evaluated at *knot* averages.



EditPythonScript

Edit a Python script.



EditScript

Open a text editor utility for editing RhinoScript files.



EditText

Open an edit box in the viewport for changing text or annotation dot.



Ellipse

Draw a closed elliptical curve from focus points, center and edges, bounding rectangle, and around a curve.



Ellipsoid

Draw a solid ellipsoid.



EMap

Visually evaluate surface smoothness using an image bitmap reflected in the surface.



EMapOff

Turn off environment map display.



EnableClippingPlane

Turn on selected clipping planes in the active viewport.



EndBulge

Adjust the shape of a curve at its end or a surface near an untrimmed edge.



Enter

Simulate the Enter key in a script.



EnterEnd

Simulate the Enter key to complete a command string in a script.



EnvironmentEditor

Background color, image, projection.



EvaluatePt

Report the world and construction plane coordinates of a picked location.





EvaluateUVPt

Report the u- and v-coordinates of a specified location on a surface.



Exit

Close Rhino.



Explode

Break objects down into components.



ExplodeBlock

Explode a block including any nested blocks into component objects.



Export

Save selected objects to a new file.



ExportBitmaps

Create files from bitmaps in the model.



ExportWithOrigin

Save objects to a new file with a specified origin and construction plane.



Extend

Lengthen a curve.



ExtendCrvOnSrf

Lengthen a curve on a surface to the surface edges.



ExtendSrf

Lengthen a surface by a value.



ExtractAnalysisMesh

Duplicate an object's *analysis* mesh.



ExtractBadSrf

Separate surfaces with errors from a polysurface.



ExtractConnectedMeshFaces

Separate mesh faces connected to a face.



ExtractControlPolygon

Fit a polyline through curve control points or a mesh through surface control points.



ExtractCurvatureGraph

Duplicate a curve's *curvature graph*.



ExtractDuplicateMeshFaces

Separate duplicated faces from a mesh.



ExtractIsocurve



Duplicate surface *isoparametric curves*.



ExtractMeshEdges

Separate faces from the parent mesh determined by a draft angle or weld status.



ExtractMeshFaces

Separate faces from a mesh.



ExtractMeshFacesByArea

Separate faces from a mesh by area.



ExtractMeshFacesByAspectRatio

Separate faces from a mesh by aspect ratio.



ExtractMeshFacesByDraftAngle

Separate faces from a mesh by a draft angle or weld status.



ExtractMeshFacesByEdgeLength

Separate faces from a mesh by edge length.



ExtractMeshPart

Separate faces from a mesh that are bounded by unwelded edges.



ExtractNonManifoldMeshEdges

Separate non-manifold faces from a mesh.



ExtractPipedCurve

Duplicate a curve's *piping* mesh.



ExtractPt

Duplicate curve control or edit points, surface control points, and mesh vertices.



ExtractRenderMesh

Duplicate the *render* mesh.



ExtractSrf

Separate or duplicate a polysurface face.



ExtractSubCrv

Separate or duplicate polycurve segments.



ExtractUVMesh

Duplicate the *uv* mesh.



ExtractWireframe

Duplicate surface or polysurface edge and *isoparametric curves*.



ExtrudeCrv

Drive closed planar curves in a straight line.





ExtrudeCrvAlongCrv

Drive closed planar curves along a path curve.



ExtrudeCrvTapered

Drive closed planar curves in a straight line tapering at an angle.



ExtrudeCrvToPoint

Drive closed planar curves tapering to a point.



ExtrudeSrf

Drive surface edges in a straight line to create a solid.



ExtrudeSrfAlongCrv

Drive surface edges along a path curve to create a solid.



ExtrudeSrfTapered

Drive surface edges in a straight line tapering at an angle to create a solid.



ExtrudeSrfToPoint

Drive surface edges tapering to a point to create a solid.

F



Fair

Remove large curvature variations in a curve while limiting the geometry changes to the specified tolerance.



Fillet

Add an arc between two curves and trims or extends the curves to the arc.



FilletCorners

Round polyline corners with arcs.



FilletEdge

Create a tangent surface between polysurface edges.



FilletSrf

Create a constant-radius round surface between two surfaces.



FillMeshHole

Fill a hole in a mesh.



FillMeshHoles

Fill all holes in a mesh.



Fin

Extrude a curve on a surface in the surface normal direction.



FindText



Search for specified text.



FindWatermark

Find invisible watermarks in Rhino models.



FitCrv

Make a non-rational NURBS curve of a specified degree that matches the input curve to within the specified tolerance.



FitSrf

Reduce the number of surface control points.



FixedLengthCrvEdit

Drag points on a curve to change its shape without changing the curve's length.



FlatShade

Shade objects without smoothing between mesh faces.



FlattenSrf

Project surface edges onto the construction plane to create planar curves.



Flip

Reverse the normal direction of a curve, surface, or mesh.



Flow

Re-align objects from a base curve to a target curve.



FlowAlongSrf

Re-align objects from a source surface to a target surface.



FoldFace

Rotate polysurface faces around an axis.



Fullscreen

Hide menus, status bar, toolbars, command prompt, and windows title bar and maximize the Rhino window.

G



GCon

Report the geometric continuity between two curves.



GetDocumentUserText

Retrieve text information attached to a file with the [SetDocumentUserText](#) command.



GetUserText

Retrieve text information attached to an object using the [SetUserText](#) command.



GradientView

Set the gradient background for a viewport.



Grid



Set grid properties.



[GroundPlane](#)

Open the GroundPlane panel.



[Group](#)

Organize objects into a single component.



[Gumball](#)

Displays the gumball widget on a selected object facilitating move, scale, and rotate transformations around the gumball origin.



[GumbballAlignment](#)

Resets the gumball widget alignment.



[GumbballDragStrength](#)

Sets the amount of the gumball drag as a percentage of mouse movement to control the speed of the gumball movement.

H



[HandleCurve](#)

Draw chained [Bézier curves](#) with editing handles.



[Hatch](#)

Create a pattern of lines to fill bounding curves.



[HatchBase](#)

Set a starting point for existing hatches.



[HatchScale](#)

Scale hatch patterns in model and layout space.



[HBar](#)

Edit a curve or surface with Bézier curve editing handles.



[Heightfield](#)

Create a surface based on gray-scale color values in an image file.



[Helix](#)

Draw a helical curve with options for number of turns, pitch, vertical, reverse, and around a curve.



[Help](#)

Open the Help topic for the current command.



[Hide](#)

Conceal objects from view.



[HideInDetail](#)

Conceal objects in a detail view.





HideLayersInDetail

Conceal layers in a detail view.



HidePt

Conceal control and edit points.



HideRenderMesh

Hide the render mesh displayed with the [ShowRenderMesh](#) command.



HideSwap

Conceal all visible objects and re-displays all previously hidden objects.



History

Store the connection between a command's input geometry and the result, so that when the input geometry changes, the result updates accordingly.



HistoryPurge

Remove history from an object and its children.



HistoryUpdate

Redefine selected objects when parents are changed.



Hydrostatics

Report hydrostatic values for surfaces and polysurfaces.



Hyperbola

Draw a hyperbolic curve from focus points, vertices, or coefficient.



Hyperlink

Manage URL addresses attached to an object.

I



IGESStudy

Examine specific entities in an IGES file by limiting which portions of the IGES folder are parsed.



Import

Merge objects from another model file.



ImportDimStyles

Import dimension styles into the current document.



ImportLayout

Import a print layout viewport from another file.



IncrementalSave

Save sequentially-numbered versions of a model.



Insert



Insert block objects stored in the file or import a file as a block definition.



InsertControlPoint

Add control points to a curve or a row of control points to a surface.



InsertEditPoint

Add edit points to a curve.



InsertKink

Add kinks to a curve.



InsertKnot

Add knots to curves or surfaces.



InsertLineIntoCrv

Flatten the curve segment between picked points.



InterpCrv

Fit a curve through picked locations.



InterpCrvOnSrf

Fit a curve through locations on a surface.



Intersect

Create point objects or curves at the intersections of curves and surfaces.



IntersectTwoSets

Find the intersection of one set of objects with another set of objects.



Invert

Deselect all selected objects and select all previously unselected objects.



InvertPt

Deselect all selected control or edit points and select all previously unselected control or edit points.



Isometric

Change the current viewport properties to a parallel projection isometric view looking from a specified quadrant toward 0.

JK



Join

Connect curves, surface edges, or surfaces to form a single object.



JoinEdge

Join two naked edges that are out of tolerance.

L





Lasso

Select objects by drawing a freehand shape.



Layer

Manage layer properties.



LayerStateManager

Save and restore the current layer state.



Layout

Create a print layout viewport.



LayoutProperties

Manage layout viewport properties.



Leader

Draw an annotation leader with attached text.



Length

Report the length of curves or surface edges.



Libraries

Open the Libraries panel.



Lights

Open the Lights panel.



LimitReferenceModel

Limit the amount of reference geometry that is available to work on.



Line

Draw a single line segment.



LinearLight

Insert a tubular light.



Lines

Draw multiple adjoining line segments.



LineThroughPt

Fit a line through any combination of points, control points, and point-cloud objects.



LinetypeDisplay

Display curves using their *linetype* properties.



List

Report information about object's data structure.



LoadScript

Load a RhinoScript.



Lock

Lock objects so they cannot be selected for editing.



LockSwap

Lock all unlocked objects and unlock all previously locked objects.



Loft

Fit a surface through profile curves that define the surface shape.

M



MacroEditor

Open an edit window for script creation and testing.



Maelstrom

Deform objects in a spiral.



Make2D

Project geometry to the construction plane.



MakeHole

Project a closed curve to a surface to define a hole.



MakeNonPeriodic

Insert a kink at the start/end of a curve or surface.



MakePeriodic

Remove the kink from the start/end of a curve or surface.



MakeUniform

Make the object knot vectors uniform without changing the control point locations.



MakeUniformUV

Make the surface knots uniform in u- or v-direction.



MappingWidget

Turn on texture mapping widgets.



MappingWidgetOff

Turn off texture mapping widgets.



MarkFoci

Place point objects at focus locations of conic curves.



Match

Change a curve end to meet another curve or surface edge with a specified continuity.





MatchCrvDir

Change a curve's direction to match another curve's direction.



MatchLayer

Change an object's layer to match another object.



MatchMapping

Change an object's texture mapping properties to match another object.



MatchMeshEdge

Move naked mesh face edges to meet adjacent face edges.



MatchProperties

Change an object's properties to match another object.



MatchSrf

Adjust a surface edge to have continuity with another surface edge.



MaterialEditor

Open the Material Editor to manage materials in the model.



Maximize

Maximize the Rhino application window.



MaxViewport

Maximize the active viewport.



Merge2MeshFaces

Merge two triangular mesh faces into one quadrangular face.



MergeAllEdges

Merge all possible edges of a surface or polysurface.



MergeEdge

Combine adjacent edges of the same surface.



MergeFace

Combine co-planar polysurface faces.



MergeFace

Combine co-planar polysurface faces.



MergeSrf

Combine two surfaces at untrimmed edges.



Mesh

Create a mesh from a NURBS surface or polysurface.



MeshBooleanDifference



Subtract the volume of one set of objects from another resulting in a mesh.



MeshBooleanIntersection

Create a new mesh from the intersected volumes of objects.



MeshBooleanSplit

Split and close objects at intersections.



MeshBooleanUnion

Combine the volumes of objects into a single mesh.



MeshBox

Draw a mesh box.



MeshCone

Draw a mesh cone.



MeshCylinder

Draw a mesh cylinder.



MeshEllipsoid

Draw a mesh ellipsoid.



MeshIntersect

Create a polyline at the intersection of mesh objects.



MeshOutline

Create a polyline outline of mesh objects or surface render mesh.



MeshPatch

Create a mesh from curves and points.



MeshPlane

Draw a rectangular mesh plane.



MeshPolyline

Create a mesh from a closed polyline.



MeshRepair

Open the Mesh Repair wizard.



MeshSphere

Draw a mesh sphere.



MeshSplit

Divide meshes into parts with another object.



MeshTCone

Draw a mesh truncated cone.





MeshToNURB

Duplicate each mesh face with a NURBS surface.



MeshTorus

Draw a mesh torus.



MeshTrim

Delete portions of a mesh inside or outside intersections with another object.



Minimize

Minimize the Rhino application window.



Mirror

Create a mirror-image copy of objects.



MirrorHole

Create a mirror image copy of one or more holes in a single planar surface.



ModelBasepoint

Set a world origin that is used when inserting the model into another.



ModifyRadius

Change the radius of existing arcs and circles.



Move

Move objects from one location to another.



MoveCrv

Move a polycurve/polyline segment.



MoveEdge

Move a polysurface edge.



MoveFace

Move a polysurface face.



MoveHole

Move or copy a hole in a planar surface.



MoveTargetToObjects

Move the target to the center of selected objects.



MoveUntrimmedEdge

Move the edge of an untrimmed polysurface face.



MoveUntrimmedFace

Move an untrimmed polysurface face.



MoveUVN



Move curve or surface control points along the u-, v-, and normal directions of the object.



MPlane

Set up a relationship between a construction plane and an object.

N



NamedCPlane

Manage the named construction planes list.



NamedPosition

Save and restore the location of objects.



NamedView

Manage the named views.



NetworkSrf

Fit a surface through a network of crossing curves.



New

Create a new model based on a template.



NewFloatingViewport

Create a new free-floating viewport.



NewViewport

Create a new viewport.



NextOrthoViewport

Activate the next viewport with an orthogonal projection.



NextPerspectiveViewport

Activate the next viewport with a perspective projection.



NextU

Select the control point in the positive u-direction.



NextV

Select the control point in the positive v-direction.



NextViewport

Activate the next viewport.



NextViewportToTop

Display the next viewport in front of all other viewports.



NoEcho

Turn off echoing of script commands to the command history window.



NonmanifoldMerge



Create a non-manifold polysurface from intersecting surfaces and polysurfaces.



[Notes](#)

Open a text notes window.

O



[Offset](#)

Copy a curve parallel to the original.



[OffsetCrvOnSrf](#)

Copy a curve on a surface parallel to the original.



[OffsetMesh](#)

Copy a mesh parallel to the original.



[OffsetNormal](#)

Copy a curve on a surface parallel to the original in the surface normal direction.



[OffsetSrf](#)

Copy a surface parallel to the original.



[OneLayerOff](#)

Turn off an object's layer.



[OneLayerOn](#)

Turn a layer on and all other layers off.



[Open](#)

Open an existing model file.



[Options](#)

Manage global options: [3D mouse](#), [alterter](#), [aliases](#), [appearance](#), [context menu](#), [display modes](#), [files](#), [general](#), [idle processor](#), [keyboard](#), [libraries](#), [licenses](#), [modeling aids](#), [mouse](#), [plug-ins](#), [render](#), [RhinoScript](#), [selection menu](#), [toolbars](#), [updates and statistics](#), [view](#).



[OptionsExport](#)

Save [Options](#) settings to a file.



[OptionsImport](#)

Restore [Options](#) settings from a file.



[OptionsPage](#)

Open the Options dialog box at a specified page.



[Orient](#)

Transform objects using two reference and two target points.



[Orient3Pt](#)

Transform objects using three reference and three target points.





[OrientCameraToSrf](#)

Align the view to a surface normal.



[OrientCrvToEdge](#)

Copy and align a curve to a surface edge.



[OrientOnCrv](#)

Transform objects along a curve normal.



[OrientOnSrf](#)

Transform objects normal to a surface.



[Ortho](#)

Restrict cursor movement to an angle.



[OrthoAngle](#)

Set the angle for cursor ortho movement.



[Osnap](#)

Set object snaps state.

P



[PackTextures](#)

Spread the texture over all of the faces of a polysurface.



[Pan](#)

Shift the location of the view camera and target parallel to the view plane.



[Parabola](#)

Draw a parabolic curve from focus and vertex or endpoint.



[Paraboloid](#)

Draw a parabolic surface or capped solid.



[Paste](#)

Insert objects from the Clipboard.



[Patch](#)

Fit a surface through curves and point objects.



[PatchSingleFace](#)

Fill a mesh hole with a single mesh face.



[Pause](#)

Stop a script for user input.



[PerspectiveAngle](#)



Set the viewport field-of-view angle.



PerspectiveMatch

Allow matching the view to the Wallpaper image.



PictureFrame

Draw a rectangular planar surface with a bitmap texture.



Pipe

Create a [surface](#), [polysurface](#), or [extrusion](#) object with a circular profile around a curve.



PlaceHole

Project a closed curve to a surface to define a hole.



Plan

Set the viewport to a parallel plan view.



Planar

Limit picking locations to an elevation.



PlanarMesh

Create a planar mesh from closed curves.



PlanarSrf

Create a planar surface from planar curves.



Plane

Draw a rectangular planar surface.



PlaneThroughPt

Fit a rectangular planar surface through points.



PlayAnimation

Play back an animation or animation preview.



Point

Draw a single point object.



PointCloud

Create a set of vertices from point objects.



PointCloudSection

Create a planar curve by intersecting a plane with a point cloud.



PointDeviation

Report the distance between points and a surface.



PointGrid

Draw a rectangular grid of point objects.





PointLight

Insert an omni-directional light.



Points

Draw multiple point objects.



PointsFromUV

Create point objects at specified surface u- and v-coordinates.



PointsOff

*Turn off **control**, **edit**, and **solid** points display.*



PointsOn

Display curve and surface control points.



Polygon

Draw a polygon with a specified number of sides with options for inscribed/circumscribed, by edge, star-shaped, around a curve, and vertical.



PolygonCount

Report the number of mesh polygons in a selected object.



Polyline

Draw a multi-segment polyline with options for line and arc segments, tracking line helpers, and close.



PolylineOnMesh

Draw a multi-segment polyline on a mesh.



PopupMenu

Display a menu with favorites and most-recently-used commands.



PopupPopular

Display a menu with the most-used commands.



PopupToolbar

Open the specified toolbar at the cursor.



PrevU

Select the control point in the negative u-direction.



PrevV

Select the control point in the negative v-direction.



PrevViewport

Activate the previous viewport.



Print

Print the current viewport or layouts.



Print3D

Print the current model on an installed 3-D printer.





PrintDisplay

Display objects using their Print Color and Print Width properties.



Project

Project curves/points toward a construction plane to intersect a surface.



ProjectOsnap

Project object snaps to the construction plane.



ProjectToCPlane

Flatten objects onto the construction plane.



Properties

Object, material, texture mapping, decals.



PropertiesPage

Open the Properties dialog box at a specified page.



PtOffSelected

Turn off control and edit points for selected objects.



Pull

Pull curves/points in the surface normal direction to intersect a surface.



Purge

Delete unused block definitions, groups, layers, hatch patterns, linetypes, dimension styles, and materials.



PurgeRefObjects

Delete worksession reference objects.



PushViewportToBack

Send a named viewport behind all viewports.



Pyramid

Draw a pyramid.

Q



QuadrangulateMesh

Merge mesh triangles into quadrangles.

R



Radius

Report the radius of a curve.



RailRevolve

Revolve a profile curve around an axis and along a rail curve.





ReadCommandFile

Read and execute a command script from a text file.



ReadEveryIGESEntity

Import all IGES entities.



ReadViewportsFromFile

Set the viewport layout to match that of another model.



Rebuild

Reconstruct curves, surfaces, and extrusion objects to a specified degree and control point number.



RebuildCrvNonUniform

Interactively modify selected curves by non-uniformly re-spacing the control points.



RebuildEdges

Restore surface edges to their surface.



RebuildMesh

Strip texture coordinates, vertex colors, surface curvatures, and surface parameters from a mesh.



RebuildMeshNormals

Remove mesh normals and reconstruct the face and vertex normals.



RebuildUV

Reconstruct surfaces to a specified control point number in the u- or v-directions.



RecordAnimation

Render and save animation frames.



Rectangle

Draw a rectangular closed polyline from with options for starting at the center, three points, vertical, and rounded with arc or conic corners.



RectangularLight

Insert a rectangular directional light.



Redo

Reverse the last Undo.



RedoMultiple

Reverse the Undo command multiple times.



RedoView

Reverse the last UndoView.



ReduceMesh

Reduce the number of mesh polygons and triangulates quadrangles.



RefreshAllTextures



Re-read the texture from their files and refresh the display.



RefreshShade

Regenerate an object's render mesh.



ReleaseFromCage

Remove objects from a control cage.



GumballRelocate

Moves the *gumball* widget to a new location on an object.



RemapCPPlane

Reorient objects to a different construction plane.



RememberCopyOptions

Specify whether Copy option on transform commands is stored.



RemoveControlPoint

Remove control points from a curve or surface.



RemoveEdge

Untrim selected surface edges.



RemoveFromGroup

Detach objects from their parent group.



RemoveKnot

Delete specified knots from a curve or surface.



RemoveMappingChannel

Remove mapping channels from an object.



RemoveMultiKnot

Remove multiple knots from curves and surfaces.



Render

Render the objects using the current renderer.



RenderInWindow

Render a selected area in the render window at viewport resolution.



RenderOpenLastRendering

Open last rendering in render window.



RenderOpenRenderImage

Open an image with the .rimage format.



RenderPreview

Render the view in the render window with a rough quality for a fast preview.



RenderPreviewInWindow



Render a selected area in the render window with a rough quality for a fast preview.



[RenderPreviewWindow](#)

Render a selected area in the viewport with a rough quality for a fast preview.



[RenderWindow](#)

Render a selected area in the viewport at viewport resolution.



[Reparameterize](#)

Recalculate an object's parameter space to match its 3-D geometry.



[Repeat](#)

Repeat any command or script/macro.



[ReplaceBlock](#)

Replace block instances with a different block definition.



[Rescue3dmFile](#)

Recover data from damaged files.



[Restore](#)

Restore the application window from being maximized.



[RevCloud](#)

Draw revision cloud curves.



[Revert](#)

Discard changes and revert to the previously saved document.



[Revolve](#)

Create a surface by revolving a profile curve around an axis.



[RevolvedHole](#)

Create holes by revolving a profile curve around an axis.



[Rib](#)

Extrude a curve in two directions to a boundary surface.



[Ribbon](#)

Offset a curve and create a ruled surface between the curves.



[Rotate](#)

Rotate objects around an axis perpendicular to the construction plane.



[Rotate3D](#)

Rotate objects around a 3-D axis.



[RotateCamera](#)

Rotate the view target around the camera.



[RotateHole](#)



Rotate a hole around an axis.



RotateView

Rotate the view camera around the target.



RoundHole

Create circular holes in surfaces.



RPC

Insert Rich Photorealistic Content (RPC) objects.



RPCSetAnimationFrame

Set the animation frame number for an RPC at the command line.



Run

Run another application from inside Rhino.



RunPythonScript

Run a Python script.



RunScript

Run a RhinoScript.

S



Save

Save the current model.



SaveAs

Save the current model with a different name, close the current model, and open the new model.



SaveAsTemplate

Save the current model as a template file.



SaveRenderWindowAs

Save the image in the render window to a file.



SaveSmall

Save geometry objects without render or analysis meshes.



Scale

Change the size of objects uniformly in the x-, y-, and z-directions.



Scale1D

Change the size of objects in one direction.



Scale2D

Change the size of objects uniformly in two directions.



ScaleByPlane



Change the size of objects in two directions non-uniformly.



ScaleDimstyle

Scales all of the distances in a dimension scale at once.



ScaleNU

Change the size of objects non-uniformly in three directions.



ScreenCaptureToClipboard

Save an image of a viewport to the Clipboard.



ScreenCaptureToFile

Save an image of the viewport as a bitmap file.



Section

Create a planar curve or points from the intersection of a cutting plane through objects.



SelAll

Select all objects.



SelBadObjects

Select all objects that do not pass [Check](#).



SelBlockInstance

Select all block instances.



SelBlockInstanceNamed

Select all block instances by name.



SelBoundary

Select objects within an existing closed curve.



SelBox

Select objects inside, outside, or crossing a box-shaped volume.



SelBrush

Drag the mouse like a brush stroke to select objects.



SelBrushPoints

Drag mouse like a brush stroke to select points and control points.



SelCaptives

Select captive objects of a specified cage controls.



SelChain

Select curve or surface edges that touch end-to-end.



SelChildren

Select children of specified parents.





SelCircular

Draw a circle to select objects.



SelClippingPlane

Select all clipping planes.



SelClosedCrv

Select all closed curves.



SelClosedMesh

Select all closed mesh objects.



SelClosedPolysrf

Select all closed polysurfaces.



SelClosedSrf

Select all closed surfaces.



SelColor

Select all objects of a specified color.



SelConnected

Select adjacent control points.



SelControls

Select all cage controls.



SelCrossing

Select with a crossing window.



SelCrv

Select all curves.



SelDim

Select all dimensions.



SelDimStyle

Select dimensions of a specified style.



SelDot

Select all annotation dots.



SelDup

Select geometrically identical objects.



SelDupAll

Select all visible geometrically identical objects.



Select



Select objects.



SelectionFilter

Restrict a selection mode to specified object types.



SelExtrusion

Select object by its object ID number.



SelGroup

Select a group by name.



SelHatch

Select hatch objects.



SelID

Select objects by object ID number.



SelLast

Select the last changed objects.



SelLayer

Select all objects on a layer.



SetLayerLinetype

Specify a linetype for a specified layer.



SelLayerNumber

Select objects by layer number.



SelLeader

Select all leaders.



SelLight

Select all lights.



SelLine

Select all lines.



SelLinetype

Select objects with the specified linetype.



SelMappingWidget

Select all texture mapping widgets.



SelMaterialName

Select objects with the same render material name.



SelMesh

Select all mesh objects.



SelNakedMeshEdgePt



Select unwelded vertices on mesh edges.



SelName

Select objects by name.



SelNamedViewWidget

Select all *Named View* widget objects.



SelNamedViewWidget

Select all *Named View* widget objects.



SelNone

Deselect all objects.



SelNonManifold

Select non-manifold objects.



SelObjectsWithHistory

Select objects that have history.



SelOpenCrv

Select all open curves.



SelOpenMesh

Select all open mesh objects.



SelOpenPolysrf

Select all open polysurfaces.



SelOpenSrf

Select all open surfaces.



SelParents

Select parents of specified children.



SelPictureFrame

Select all objects created with the *PictureFrame* command.



SelPolyline

Select all polylines.



SelPolysrf

Select all polysurfaces.



SelPrev

Re-select the previous selection set.



SelPt

Select all *point* objects, *control points*, *edit points*, and *solid points*.





SelPtCloud

Select all point cloud objects.



SelRenderColor

Select objects by their render color.



SelShortCrv

Select all curves shorter than a specified length.



SelSrf

Select all surfaces.



SelText

Select all text.



SelTrimmedSrf

Select all trimmed surfaces.



SelU

Select all connected control points in the u-direction.



SelUntrimmedSrf

Select all untrimmed surfaces.



SelUV

Select connected control points in the u- and v- directions.



SelV

Select all connected control points in v-direction.



SelVisible

Select all surfaces or meshes that are in front of other objects with a crossing selection.



SelVolumePipe

Select objects inside, outside, or crossing a pipe-shaped volume.



SelVolumeSphere

Select objects inside, outside, or crossing a spherical volume.



SelWindow

Select with an enclosing window.



SendBackward

Send curves backward in draw order



SendFile

Open the default mail program with the current file as an attachment.



SendToBack



Send curves to back of draw order



SetActiveViewport

Activate a named viewport.



SetCurrentDimstyle

*Specify the current *dimensions* style.*



SetCurrentRenderPlugIn

Specify a rendering plug-in.



SetDisplayMode

Specify a viewport display mode.



SetDocumentUserText

Attach text information to the file.



SetFlythroughAnimation

Animate the camera and target movement along a path curve.



SetGroupName

Name a group.



SetIgesLayerLevelMap

Control the correspondence between Rhino layers and IGES levels.



SetLayerToObject

Set the current layer to match a specified object.



SetLinetype

Specify a curve's linetype.



SetLinetypeScale

Specify the global linetype scale from the command line.



SetMaximizedViewport

Maximize a named viewport inside the application window.



SetObjectDisplayMode

Assign separate display attributes to objects, overriding viewport settings.



SetObjectName

Assign a name to an object.



SetOneDaySunAnimation

Animate sun movement through a specified calendar day.



SetOrtho

Turn ortho mode on, off, or toggle the current state.



SetPathAnimation



Animate the camera and target movement along separate path curves.



SetPlanar

Turn Planar mode on, off, or toggle the current state.



SetPt

Move objects to a specified location in the x-, y-, and/or z-directions.



SetRedrawOff

Disable screen redraw, construction plane, and view changes during scripts.



SetRedrawOn

Enable screen redraw, construction plane, and view changes during scripts.



SetSeasonalSunAnimation

Animate sun movement through a specified week, month, or year.



SetSnap

Turn grid snap on, off, or toggle the current state.



SetSpotlightToView

Match spotlight direction to the viewport camera direction.



SetSurfaceTangent

Set the tangent direction of an untrimmed surface.



SetTurntableAnimation

Animate camera rotation once around the current target point.



SetUserText

Attach text information to an object.



SetView

Change the view to a standard construction plane view.



SetViewToSpotlight

Match the view to a spotlight direction.



SetWorkingFolder

Specify the default folder for saving and opening files.



SetZoomExtentsBorder

Set distance between objects and viewport edges for Zoom Extents.



Shade

Temporarily shade the current viewport.



ShadeSelected

Shade selected objects only.





Shear

Skew objects parallel to one axis at an angle.



Shell

Remove the selected surfaces from a polysurface, and then offset the remaining surfaces to create a solid with a specified thickness.



ShortPath

Create the shortest possible curve (geodesic) between two points on a surface.



Show

Redisplay all hidden objects.



ShowEdges

*Highlight edges of surfaces and polysurfaces. Displays the **Edge Analysis** control.*



ShowEdgesOff

Turn off edge display.



ShowInDetail

Redisplay hidden objects in a detail view.



ShowLayersInDetail

Redisplay hidden layers in a detail view.



ShowOsnap

Turn the Osnap control on.



ShowPt

Redisplay all hidden control points and edit points.



ShowRenderMesh

Display the render mesh for selected objects.



ShowSelected

Redisplay selected hidden objects.



ShowSelectedInDetail

Redisplay selected hidden objects in a detail view.



ShowToolbar

Open a specified toolbar.



ShowZBuffer

Create a grayscale z-buffer bitmap with the same dimensions as the viewport.



ShrinkTrimmedSrf

Contract the underlying untrimmed surface close to trimming boundaries.



ShrinkTrimmedSrfToEdge



Contract the underlying untrimmed surface as close as possible to the trimming boundaries.



Silhouette

Create outline curves from a surface or polysurface.



SimplifyCrv

Replace each curve segment that has the geometry of a line or an arc with a true line or arc.



Sketch

Drag the mouse to draw a curve.



Slab

Offset a polyline, and extrude and cap the result to create a solid.



SmartTrack

Turn on a system of temporary reference lines and points.



Smash

Flatten a surface without restriction to single-directional curvature.



Smooth

Average the positions of curve and surface control points and mesh vertices in a specified region and evens out the spacing of selected control points in small increments to remove unwanted detail, and loops in curves and surfaces.



Snap

Toggle the current snap mode state.



SnapSize

Specify the grid snap spacing.



SnapToLocked

Allow snaps to work on locked objects and locked layers.



SoftEditCrv

Move the surrounding curve area smoothly relative to the distance.



SoftEditSrf

Move the surrounding surface area smoothly relative to the distance.



SoftMove

Move objects relative to a center with falloff.



SolidPtOn

Turn on control points for polysurfaces.



Sphere

Draw a solid sphere.



Spiral

Draw a spiral curve with options for number of turns, pitch, flat, vertical, and around a curve.





Split

Divide objects using other objects as cutters.



SplitDisjointMesh

Divide into separate objects meshes that do not connect, but are still one object.



SplitEdge

Divide a surface edge.



SplitFace

Divide a planar polysurface face.



SplitMeshEdge

Divide a mesh edge.



SplitMeshWithCurve

Divide a mesh with a curve.



SplitViewportHorizontal

Divide a viewport horizontally into two viewports.



SplitViewportVertical

Divide a viewport vertically into two viewports.



Splop

Copy, rotate, scale, and wrap objects on a surface.



Spotlight

Insert a light cone object.



Squish

Flatten a non-developable (curved in two directions) 3-D mesh or NURBS surface into a flat 2-D pattern.



SquishBack

*Return curves and surfaces to the original *squished* 3-D shape.*



SquishInfo

Provide information about the settings used to squish the object.



SrfControlPtGrid

Draw a surface from a grid of points that represent surface control points.



SrfPt

Draw a surface from three or four corner points.



SrfPtGrid

Draw a surface from a grid of points that lie on the surface.



SrfSeam

Change the location where the start and end edges meet on a closed surface.





STEPTree

Browse the structure of a STEP file.



Stretch

Scale areas of an object in one direction.



SubCrv

Shorten a curve to the new picked endpoints.



Sun

Open the Sun panel.



SwapMeshEdge

Transpose the corners of mesh triangles.



SwapView

Exchange the views in two viewports with one another.



Sweep1

Fit a surface through profile curves and one edge curve.



Sweep2

Fit a surface through profile curves and two edge curves.



Symmetry

Mirror a copy of a curve or surface with continuity.



SynchronizeCPlanes

Update all viewports to standard views.



SynchronizeRenderColors

Change an object's material color to match its object or layer display color.



SynchronizeViews

Set the scale and center of all viewports to match the active viewport.

T



Taper

Deform objects toward or away from an axis.



TCone

Draw a cone whose apex is truncated by a plane.



TestDecimalPoint

Checks to see whether numbers with decimal points are being correctly printed and read using a period as the decimal point. If the decimal point has been changed to a comma, the command changes the decimal point character back to a period.



Text



Create annotation text.



[TextObject](#)

Draw text-shaped curves, surfaces, or polysurfaces based on TrueType fonts.



[TextProperties](#)

Set the font, bold, italic, height.



[TextScale](#)

Scale text in model and layout space.



[TexturePalette](#)

Open the Texture Editor.



[ThicknessAnalysis](#)

Use false-color display to evaluate the thickness of a solid.



[ThicknessAnalysisOff](#)

Turn off thickness analysis display.



[TiltView](#)

Rotate the view around the view axis.



[ToggleFloatingViewport](#)

Toggle the viewport between docked and floating.



[ToggleRenderMesh](#)

Toggle the display state of render meshes on an object.



[Toolbar](#)

Manage the toolbars and toolbar buttons.



[ToolbarLock](#)

Lock docked toolbars locations.



[ToolbarReset](#)

Restore toolbars to the default layout.



[Torus](#)

Draw a torus (donut shape).



[TriangulateMesh](#)

Split each quadrangular mesh face into two triangles.



[TriangulateNonPlanarQuads](#)

Split each non-planar quadrangular mesh face into two triangles.



[TriangulateRenderMeshes](#)

Split each quadrangular polygon render mesh face into two triangles.



[Trim](#)

Cut and delete selected portions of an object at the intersection with another object.



TruncatedPyramid

Draw a pyramid whose apex is truncated by a plane.



Tube

Draw a closed cylinder with a concentric cylindrical hole.



Turntable

Rotate a view around the target.



TweenCurves

Create curves between two open or closed input curves.



TweenSurfaces

Create intermediate surfaces between two input surfaces.



Twist

Deform objects by rotating portions around an axis.

U



Undo

Undo the last action.



UndoMultiple

Display a list of recent commands to reverse.



UndoSelected

Reverse recent changes for a single object only.



UndoView

Undo the last view change.



Ungroup

Remove the group status from objects.



UnifyMeshNormals

Change the normal direction mesh faces so they all point in a consistent direction.



UnjoinEdge

Split polysurface edges.



Unlock

Unlock all locked objects.



UnlockSelected

Unlock selected locked objects.





UnpackTextures

Reset the texture coordinates.



UnrollSrf

Flatten (develop) a surface or polysurface with curvature in one direction to a planar surface.



UnrollSrfUV

Flatten (develop) a surface or polysurface with curvature in one direction to a planar surface while maintaining the u- and v-directions of the input surface.



Untrim

Remove trim curves from trimmed surfaces.



UntrimAll

Untrim all edges.



UntrimBorder

Untrim surface border.



UntrimHoles

Untrim interior holes.



Unweld

Add creases to a smooth mesh by creating coincident vertices.



UnweldEdge

Add creases to a smooth mesh by creating coincident vertices along selected edges.



Unwrap

Project surface mapping texture coordinates and the texture of an object onto the world xy-plane.



UseExtrusions

Specifies whether extrusion objects or polysurfaces are used when extruding straight-side objects.



UVEditor

Project the texture coordinates of the selected object to a specified region of space.

V



VariableBlendSrf

Create a blend surface between surface edges with varying radius values.



VariableChamferSrf

Create a chamfer surface between surface edges with varying distance values.



VariableFilletSrf

Create a round tangent surface between two surface edges with varying radius values.



VariableOffsetSrf

Copy a surface specified varying distances from the original surface.





ViewCaptureToClipboard

Save an image of the current view to the Windows Clipboard.



ViewCaptureToFile

Save an image of the current view to a file.



ViewFirstFrame

Display the first animation frame.



ViewFrameNumber

Display the specified animation frame number.



ViewLastFrame

Display the last animation frame.



ViewNextFrame

Display the next animation frame.



ViewportProperties

Title, size, projection, camera and target, lens length, wallpaper.



ViewportProperties (Rhino 5)

Title, size, projection, camera and target, lens length, wallpaper.



ViewportTabs

Display a tab control UI along the viewport edge.



ViewPreviousFrame

Display the previous animation frame.



Volume

Report the volume of closed surfaces, polysurfaces, or meshes.



VolumeCentroid

Report the coordinates of and place a point object at the volume centroid of surfaces and polysurfaces.



VolumeMoments

Report the volume moments of inertia of surfaces and polysurfaces.

W



WalkAbout

Toggle between WalkAbout and normal navigation modes.



WebBrowser

Opens the Web Browser panel.



Weight



Edit the weight of a curve or surface control point.



[Weld](#)

Remove creases from a mesh by merging coincident mesh vertices.



[WeldEdge](#)

Remove creases from a mesh by merging coincident mesh vertices along selected edges.



[WeldVertices](#)

Remove creases from a mesh by merging all selected mesh vertices.



[What](#)

Report object properties details.



[WireCut](#)

Trim a polysurface with a curve similar to cutting foam with a heated wire.



[Worksession](#)

Manage a list of models that can be used as reference geometry.

X, Y, Z



[Zebra](#)

Visually evaluate surface smoothness and continuity using a stripe map.



[ZebraOff](#)

Turn off zebra analysis.



[Zoom](#)

Move the viewport camera so the area defined by a window selection fills the viewport.



[Zoom1To1Calibrate](#)

Calibrate the screen for the Zoom command, 1To1 option.



[ZoomLens](#)

Adjust the lens length of the viewport camera in a perspective view.



[ZoomNaked](#)

Zooms to include all naked edges on selected objects with naked edges.



[ZoomNonManifold](#)

*Zooms to include all non-manifold edges on selected objects with **non-manifold** edges.*

