Command List

New in Rhino

Numbers



Draw a single mesh face.



Set up a three-viewport workspace.



Set up a four-viewport workspace.

Α



AcadSchemes

Edit AutoCAD export schemes.



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



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



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



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.



Line up bounding boxes of objects.



AlignMeshVertices

Force mesh vertices to the same location.



AlignProfiles

Line up one curve to another.



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

ApplyWatermark

Add a spherical texture mapping channel to an object.

ApplySurfaceMapping

Add a surface texture mapping channel to an object.

Embed invisible watermarks in Rhino models.

ArcBlend

Create an arc blend curve between two curves.

Report an object's area.



Report and marks an object's area centroid.



AreaMoments

Report an object's area moments of inertia.



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.



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.



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.



AttachGHSData

Add GHS-specific information to objects.



Save the current model to a backup file.

В



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.



Connect two curves with continuity control.



BlendEdge

Create a surface between polysurface edges maintaining continuity.



Create a blend surface between two surfaces with continuity control.



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.



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.



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



BoundingBox

Creates a polyline or solid that encloses objects.





Draws a solid box.



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



Create a control cage object used by the CageEdit command to deform other objects.



CageEdit

Deform objects smoothly using control cage objects.



Toggle the on-screen calculator.



CalcRPN

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



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



Cancel the current command and deselects objects.



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



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.





ChangeToCurrentl aver

Change an object's layer to the current layer.



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.



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.



Move mesh face vertices to a single vertex.

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.



Continue to draw the selected curve interpolating through picked points.

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

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.

Сору

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.



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.



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.



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. X 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. 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

D

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. ≟¦...i 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.



Dimension the length of a curve.



Dimension the diameter of a curve.



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



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-v axis.



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.



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



Domain

Report the domain of a curve or surface. Draw an annotation dot that stays parallel to and sizes with the view. DraftAngleAnalysis

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



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.

Ε

EarthAnchorPoint

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



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



EdgeSrf

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



EditLiahtByLookina

Set a spotlight direction using view manipulation tools.



• EditPtOn

Display points on the curve evaluated at knot averages.



EditPvthonScript

Edit a Python script.



EditScript

Open a text editor utility for editing RhinoScript files.



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



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



Ellipsoid

Draw a solid ellipsoid.



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



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.



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



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

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.



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

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.

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

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.

Create a constant-radius round surface between two surfaces.

FillMeshHole

Fill a hole in a mesh.

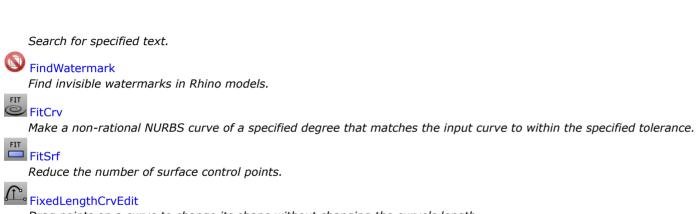
FillMeshHoles

Fill all holes in a mesh.

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

FindText





Reduce the number of surface control points.



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



Shade objects without smoothing between mesh faces.



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



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.



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

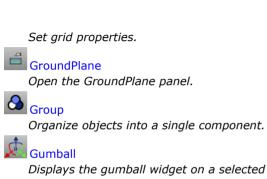
Retrieve text information attached to an object using the SetUserText command.



GradientView

Set the gradient background for a viewport.





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



GumballAlignment

Resets the gumball widget alignment.



GumballDragStrength

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

Н



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.



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



Open the Help topic for the current command.



Conceal objects from view.



HideInDetail

Conceal objects in a detail view.



Conceal lavers 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.



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.



/ ImportLavout

Import a print layout viewport from another file.



Incremental Save

Save sequentially-numbered versions of a model.



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.



InsertLineIntoCry

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.



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

JK

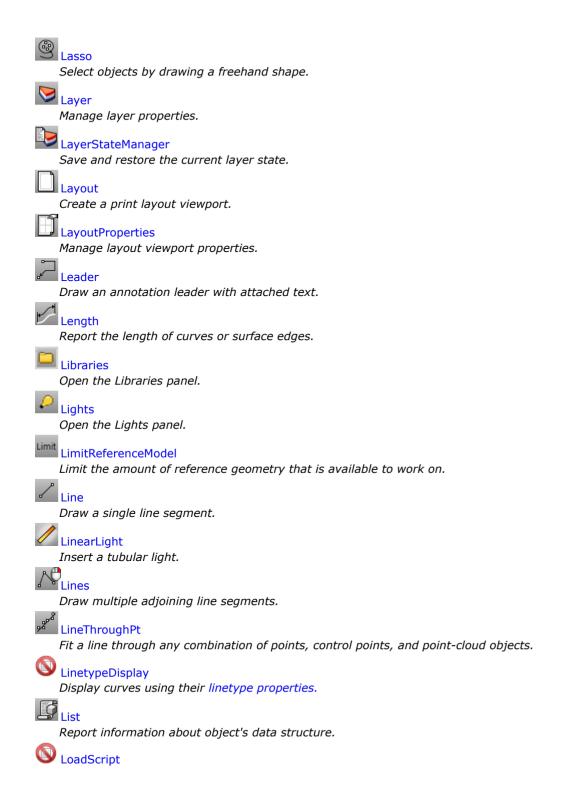


Connect curves, surface edges, or surfaces to form a single object.



Join two naked edges that are out of tolerance.





Load a RhinoScript. Lock

Lock objects so they cannot be selected for editing.



Lock all unlocked objects and unlock all previously locked objects.



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

М



MacroEditor

Open an edit window for script creation and testing.



Maelstrom

Deform objects in a spiral.



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.

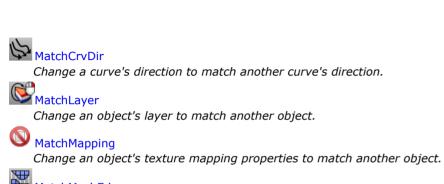


Place point objects at focus locations of conic curves.



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







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.

Combine two surfaces at untrimmed edges.

∎Mesn 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.



Duplicate each mesh face with a NURBS surface.



Draw a mesh torus.



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



Minimize

Minimize the Rhino application window.



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.



Move a polycurve/polyline segment.



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.



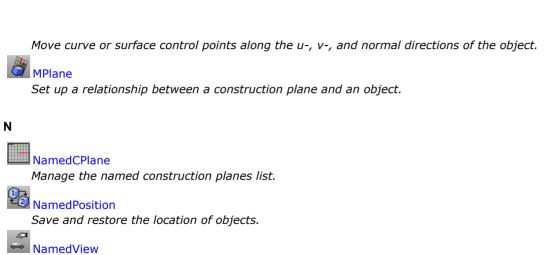
MoveUntrimmedFace

Move an untrimmed polysurface face.



MoveUVN







Manage the named views.



Fit a surface through a network of crossing curves.



Create a new model based on a template.



Create a new free-floating viewport.



Create a new viewport.

NextOrthoViewport

Activate the next viewport with an orthogonal projection.



Activate the next viewport with a perspective projection.



Select the control point in the positive u-direction.



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.

0



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.



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.



Manage global options: 3D mouse, alerter, 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.



Transform objects using two reference and two target points.



Transform objects using three reference and three target points.



Alian the view to a surface normal.

Copy and align a curve to a surface edge.

9 OrientOnCrv

Transform objects along a curve normal.

OrientOnSrf

Transform objects normal to a surface.

Ortho

Restrict cursor movement to an angle.

us* ⊕ OrthoAngle

Set the angle for cursor ortho movement.

Osnap

Set object snaps state.



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.

A Patch

Fit a surface through curves and point objects.

PatchSingleFace

Fill a mesh hole with a single mesh face.

Nause 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.

0 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.



Insert an omni-directional light.



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.



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



NN 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.



Select the control point in the negative u-direction.



Select the control point in the negative v-direction.



PrevViewport

Activate the previous viewport.



Print the current viewport or layouts.



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



Display objects using their Print Color and Print Width properties.



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



Project object snaps to the construction plane.



ProjectToCPlane

Flatten objects onto the construction plane.



Properties

Object, material, texture mapping, decals.



Open the Properties dialog box at a specified page.



PtOffSelected

Turn off control and edit points for selected objects.



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



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



PurgeRefObjects

Delete worksession reference objects.



Send a named viewport behind all viewports.



Pyramid

Draw a pyramid.

Q



QuadrangulateMesh

Merge mesh triangles into quadrangles.

R



Report the radius of a curve.



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



Read and execute a command script from a text file.



ReadEvervIGESEntity

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.



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.



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. RemapCPlane



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 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.



Rotate objects around a 3-D axis.



Rotate the view target around the camera.



	Rotate a hole around an axis.
	RotateView
	Rotate the view camera around the target.
0	RoundHole
	Create circular holes in surfaces.
w	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.
Q	
	SaveRenderWindowAs Save the image in the render window to a file.
ِ الله	s 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.
5	 Scale2D
	Change the size of objects uniformly in two directions.
7	ScaleByPlane

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



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.



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.

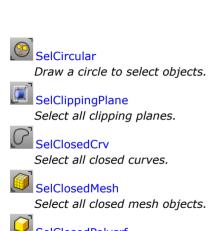


Select curve or surface edges that touch end-to-end.



SelChildren

Select children of specified parents.



SelClosedPolysrf

Select all closed polysurfaces.



SelClosedSrf

Select all closed surfaces.



Select all objects of a specified color.



SelConnected

Select adjacent control points.



SelControls

Select all cage controls.



SelCrossing

Select with a crossing window.



Select all curves.



Select all dimensions.



SelDimStyle

Select dimensions of a specified style.



SelDot

Select all annotation dots.



Select geometrically identical objects.



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.
۰¬	SelOpenCrv Select all open curves.
	SelOpenMesh Select all open mesh objects.
9	SelOpenPolysrf Select all open polysurfaces.
9	SelOpenSrf Select all open surfaces.
Ť	SelParents Select parents of specified children.
	SelPictureFrame Select all objects created with the PictureFrame command.
	SelPolyline Select all polylines.
1	SelPolysrf Select all polysurfaces.
	SelPrev Re-select the previous selection set.
%	SelPt Select all point objects, control points, edit points, and solid points.



Select objects by their render color.

Select all curves shorter than a specified length.

SelSrf

Select all surfaces.



Select all text.



Select all trimmed surfaces.



Select all connected control points in the u-direction.



SelUntrimmedSrf

Select all untrimmed surfaces.



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



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



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. SetCurrentRenderPluaIn 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. o→o O→o SetPt Move objects to a specified location in the x-, v-, and/or z-directions.





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



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



SetSeasonalSunAnimation

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



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.



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.



Skew objects parallel to one axis at an angle.



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.



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.



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.

SimplifyCry

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.

Slah

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.



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.



Specify the grid snap spacing.



SnapToLocked

Allow snaps to work on locked objects and locked layers.



Move the surrounding curve area smoothly relative to the distance.



Move the surrounding surface area smoothly relative to the distance.



SoftMove

Move objects relative to a center with falloff.



Turn on control points for polysurfaces.

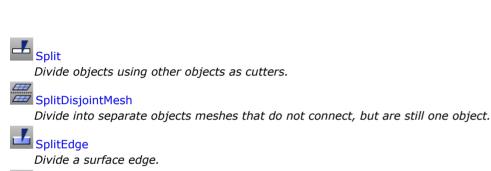


Draw a solid sphere.



Spiral

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



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.

SauishBack

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.

Draw a surface from three or four corner points.

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

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



Browse the structure of a STFP file.



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.



Sween2

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.

Т



Deform objects toward or away from an axis.



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.
T	TextObject
	Draw text-shaped curves, surfaces, or polysurfaces based on TrueType fonts.
	TextProperties
	Set the font, bold, italic, height.
TEXT TEXT	TextScale
	Scale text in model and layout space.
٥	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.
\leftarrow	
<u>4</u> 4	ToggleFloatingViewport
	Toggle the viewport between docked and floating.
	ToggleRenderMesh Toggle the display state of render meshes on an object.
ПŶ	1
	Toolbar
	Manage the toolbars and toolbar buttons.
	ToolbarLock Lock docked toolbars locations.
S	ToolbarReset
	Restore toolbars to the default layout.
•	Torus
	Draw a torus (donut shape).
	 TriangulateMesh
	Split each quadrangular mesh face into two triangles.
4	
	TriangulateNonPlanarQuads
	Split each non-planar quadrangular mesh face into two triangles.
	TriangulateDandarMachae
	TriangulateRenderMeshes Split each guadrangular polygon render mech face into two triangles
	Split each quadrangular polygon render mesh face into two triangles.
4	Trim

J	Tube
	Draw a closed cylinder with a concentric cylindrical hole.
, _{0°}	Turntable
	Rotate a view around the target.
3	
	TweenCurves
_	Create curves between two open or closed input curves.
5	TweenSurfaces
_	Create intermediate surfaces between two input surfaces.
8	Twist
	Deform objects by rotating portions around an axis.
ľ	Undo
	Undo the last action.
0	UndoMultiple
	Display a list of recent commands to reverse.
3	UndoSelected
	Reverse recent changes for a single object only.
9	
J	UndoView
	Undo the last view change.
•	Ungroup
	Remove the group status from objects.
1	UnifyMeshNormals
_	Change the normal direction mesh faces so they all point in a consistent direction.
,	
ಭ	UnjoinEdge
2	Split polysurface edges.
ĺ	Unlock
	Unlock all locked objects.
3	UnlockSelected
	Unlock selected locked objects.
	

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

Draw a pyramid whose apex is truncated by a plane.

TruncatedPyramid



Reset the texture coordinates.



UnrollSrf

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



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.



Add creases to a smooth mesh by creating coincident vertices.



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



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



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



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

V



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



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



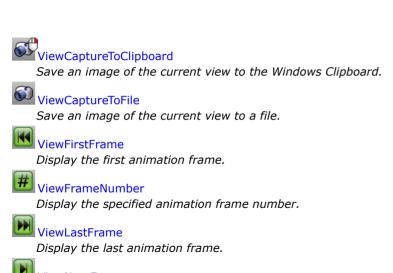
VariableFilletSrf

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



VariableOffsetSrf

Copy a surface specified varying distances from the original surface.





Display the next animation frame.



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.



Report object properties details.



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



Visually evaluate surface smoothness and continuity using a stripe map.



ZebraOff

Turn off zebra analysis.



700m

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.



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.

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Open topic with navigation

