

T-Splines 2.0 WIP 11B for Rhino commands at-a-glance

November 11, 2008

L= left mouse button R= right mouse button

Download the latest version of the WIP at www.tsplines.com/latestversion.html

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Main Toolbar

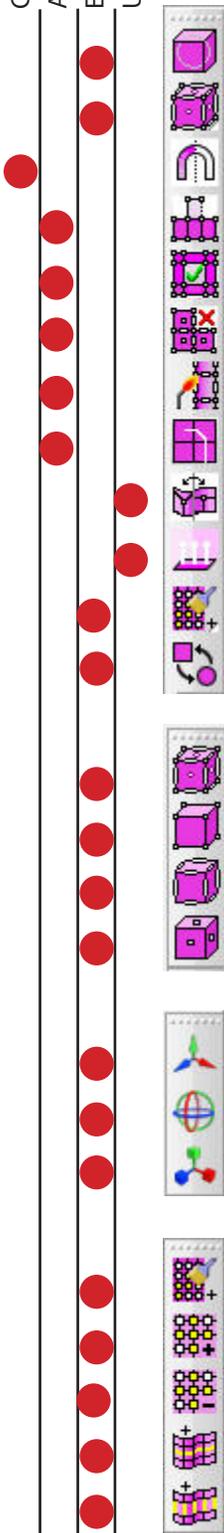
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- L: **tsConvert**. Convert NURBS and meshes to T-Splines.
R: **tsConvertToRhinoSrf**. Convert T-Splines to Rhino NURBS surfaces.
 - L: **tsmBox**. Create a T-Splines box primitive.
 - L: **tsLoft**. Create a T-Splines surface by lofting curves while constraining areas of local detail.
 - L: **tsSkin**. Fit a T-Splines surface to a non-rectangular network of curves.
 - L: **tsControlPolygonToSrf**. Create a T-Spline surface from a control polygon of line segments.
R: **tsExtractControlPolygon**. Extract the control polygon from a T-Spline.
 - L: **tsImportOBJ**. Import meshes with n-gons into Rhino with minimal triangulation.
 - L: **tsExtrude**. Extrude T-Splines faces and edges
 - L: **tsCrease**. Locally crease T-Splines edges. Perfectly sharp or rounded creases are possible.
R: **tsRemoveCrease**. Remove a crease from a T-Spline.
 - L: **tsThicken**. Quickly make an approximate offset of a T-Spline with rounded or sharp edges.
 - L: **tsInsertPoint**. Add control points to a specific part of the T-Spline mode.
R: **tsDeleteIsocurveSegment**. Delete isocurve segments to eliminate unneeded geometry in a model.
 - L: **tsExtendIsocurve**: Similar to tsInsertPoint; adds control points by extending a T-Point.
 - L: **tsMerge**. Merge two T-Splines surfaces or untrimmed NURBS into a single surface.
 - L: **tsMesh**. Mesh a T-Spline. The Rhino mesh command works also, but tsMesh is optimized for T-Splines.
L: **tsPolyMode**. Convert a smooth T-Spline surface to a T-Mesh for advanced editing options.
R: **tsSmoothMode**. Convert a T-Mesh to a smooth T-Splines surface to use commands that only work on a smooth T-Splines surface (tsInsertPoint, tsMerge, tsSurfacePoints...) and for export to NURBS.
 - L: **tsEditMode**. Activate the translate manipulator for moving grips. Also enables hotkeys.
 - L: **tsSurfacePoints (smooth)**. Manipulate points on the T-Splines surface with a gradual falloff. R: PointsOff
 - L: **tsSurfacePoints (local)**. Manipulate points directly on the T-Splines surface; only one point will move.
R: PointsOff
 - L: **tsScriptFlattenPoints**. Flatten control points to the average plane passing through the control points.
 - L: **tsSetStarSmoothness**. Smooth the surface near star points for higher quality export.
 - L: **tsSetSurfaceLayout**. Determine how the T-Spline will split into NURBS rectangular regions.
 - L: **tsSplitCurves**. Split curves that intersect within a given tolerance.
 - L: **tsScriptExtrudeControlPolygon**. Extrude a 2d control polygon to 3d; often used before generating a T-Spline with tsControlPolygonToSrf.
 - L: **Hotkeys**. Assign hotkeys to T-Splines and Rhino commands. Hotkeys only work when tsEditMode is active.

Primitives toolbar

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- L: **tsmBox**. Create a T-Splines box primitive. Option: with axial symmetry.
 - L: **tsmPlane**. Create a T-Splines plane primitive. Option: with axial symmetry.
 - L: **tsmSphere**. Create a T-Splines sphere primitive. Option: with axial or radial symmetry.
 - L: **tsmCylinder**. Create a T-Splines cylinder primitive. Option: with axial or radial symmetry.
 - L: **tsmCone**. Create a T-Splines cone. Option: with axial or radial symmetry.
 - L: **tsmTorus**. Create a T-Splines torus. Option: with axial or radial symmetry.



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Polytools toolbar

- L: **tsPolyMode**. Convert a smooth T-Spline surface to a T-Mesh for advanced editing options.
- R: **tsSmoothMode**. Convert a T-Mesh to a smooth T-Splines surface for export to NURBS and T-Splines surface editing options (tsInsertPoint, tsMerge, tsSurfacePoints...)
- L: **All grips on**. Turn on all T-Splines grips (face, edge, vertex) and enters tsEditMode. R: Grips off.
- L: **tsmSymmetry**. Mirror a T-Mesh and apply axial or radial symmetry. R: **Turns off symmetry**.
- L: **tsmAppend**. Similar to extrude edge; add a new face to the edge of a T-Mesh.
- L: **tsmFillHole**. Fill a hole in a T-Mesh by clicking on an edge of the hole.
- L: **Delete**. Delete a point, edge or face from a T-Mesh.
- L: **tsmWeld**. Weld points of a single T-Mesh; or to combine two T-Meshes into one. R: **tsmUnweld**. Unweld points of a T-Mesh. The unwelded points will remain on top of each other until they are moved.
- L: **tsmInsertPoint**: Insert points on a T-Mesh; integrated with Rhino's OSnaps.
- R: **tsmSubdivideFace**: Subdivide one T-Mesh face into four faces.
- L: **tsmLayout**: Change star points to T-Points, and visa versa, for more control over surface direction and smoothness.
- L: **tsmFlip**: Flip the T-Mesh direction.
- L: Toggle **paint selection mode**: Activate "paint" selection of grips in tsEditMode.
- L: Toggle **smooth preview**: Turn smooth preview on and off in tsEditMode.

Grips toolbar

- L: **All grips on**. Turn on all T-Splines grips (face, edge, vertex) and enter tsEditMode. R: Grips off.
- L: **Vertex grips on**. R: Grips off.
- L: T-Mesh **edge grips on**; tsEditmode is activated. R: Grips off.
- L: T-Mesh **face grips on**; tsEditmode is activated. R: Grips off.

Manipulator toolbar

- L: tsEdit mode: Activate the **translate manipulator** for moving grips and enables hotkeys. R: Hide manipulator.
- L: tsEdit mode: Activate the **rotate manipulator** for moving grips and enables hotkeys. R: Hide manipulator.
- L: tsEdit mode: Activate the **scale manipulator** for moving grips and enables hotkeys. R: Hide manipulator.

Selection toolbar

- L: Toggle **paint selection mode**: Activate "paint" selection of grips in tsEditMode.
- L: **Grow grip selection**: Increase the number of face, edge, or vertex grips in the selection.
- L: **Shrink grip selection**: Decrease the number of face, edge, or vertex grips in the selection.
- L: **Select grip loop**: Select a loop of edges, faces, or vertices, based on the original selection.
- L: **Select edge ring**: Select a ring of edges based on the original edge selection.