

# Create smooth, organic designs

Import concept models and surface designs from subdivision or polygonal modeling applications directly into SolidWorks without loss of quality. Fully integrated into the SolidWorks modeling environment, tsElements creates a smooth, gap-free surface or solid that can be manipulated with intuitive and fun push-pull commands with 100 percent NURBS compatibility.



Jaquint Laborer

*“A recent design project that would have typically been a three- to four-hour modeling job for me took only 20 minutes with T-Splines. That means I could pump out 10 to 15 design iterations in a day, and more quickly converge on the final design with my client.”*

—  
Dan Falvey,  
owner, tools4design

Visit [www.tsplines.com](http://www.tsplines.com) to download a free trial and learn more.

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Tools for organic design

**tsElements**  
FOR SOLIDWORKS®



Tommi Laiho

## Features

**Import .obj models:** tsElements for SolidWorks is the only way to import .obj models from 3dsMax, modo, Maya, ZBrush, or T-Splines for Rhino as editable, watertight solid or surface bodies.

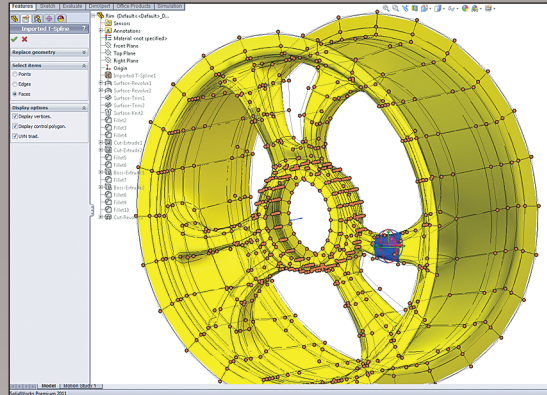
**“Push/pull” modifications:** Push and pull on faces, edges, and control points to tweak the model inside SolidWorks.

**Push-button conversion:** Your imported model is automatically converted to a NURBS surface or solid. The T-Splines technology that is at the core of tsElements ensures 100 percent compatibility to NURBS.

**Feature tree integration:** The rest of the feature tree will see the shape as a standard surface or solid and update when modifications are made, so you can harness the power of SolidWorks to add exact details to your model.

*“T-Splines has allowed me to explore several ideas for a client without investing too much time on a single concept. I usually tell people it’s a virtual combination of sketching and modeling clay.”*

Jak Figler, Designer



## Benefits

**Create smooth organic designs:** Don’t compromise the form or aesthetics of your design with fit or function requirements or limitations in your CAD modeling environment. With tsElements, models can be imported and manipulated from most industrial or concept design application.

**Win more business with faster iterations:** Most designs, especially freeform designs, are not perfect after the first try. tsElements lets you make lots of fast iterations, be more responsive to your clients and win more business.

**Reduce costs with model reuse:** Organic models are much easier to make in subdivision surface and polygonal modeling programs, and such models are inexpensive to purchase. Save yourself design time by buying stock models like humans, vehicles, etc., then using them as reference geometry inside SolidWorks.

**Speed up projects with tooling-ready designs:** T-Splines surfaces are ready for analysis and manufacturing. All models created with tsElements convert to watertight surfaces and solids, suitable to the demands of CAD, CAM, and CAE. Costly project delays due to rebuilding of surfaces can be avoided.

**Make your work more intuitive and fun:** Work with your imported surfaces as if they were modeling clay. With a natural and fun interface, change the shape of the surfaces at will and never worry about losing continuity.

## How it works

1. Import a subdivision surface model from 3dMax, Maya, modo, T-Splines for Rhino, or other software.
2. Open the model in SolidWorks as a solid or surface body.
3. Manipulate the model to change the shape in tsElements.
4. Thicken, fillet, add ribs and apply features in SolidWorks.

## Why T-Splines

T-Splines are an extremely general CAD surface type, invented and patented in 2003 by Dr. Thomas Sederberg and commercialized by T-Splines, Inc. This innovative new surface type is the first to be fully compatible with both NURBS (used in mechanical CAD and industrial design) and subdivision surfaces (used in animation and styling tools). T-Splines can represent all sorts of shapes as C2 smooth, mathematically watertight models, and can always be exported to NURBS with no loss.

Commercial applications of T-Splines have focused on bringing the speed and aesthetic benefits of subdivision surfacing to CAD software.

As a plug-in for Rhino, T-Splines has seen adoption across a broad range of industries, and is used today by more than 1,000 customers. tsElements is the first product based on T-Splines developed specifically for the SolidWorks market.

