

## #1243: HyperCrash – Smooth Option

**Product:** HyperCrash

**Product Version:** HyperCrash 12.0 and above

### Topic Objective

Smooth option in HyperCrash

### Topic Details

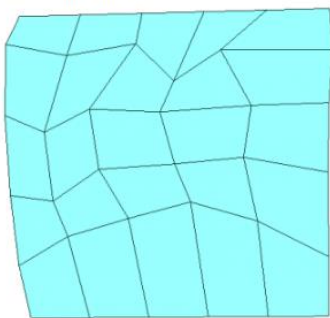
The **Smooth** option lets you improve a mesh by adjusting node positions to moderate sharp variations in size or quality in adjacent elements.

- This option can be accessed from **Mesh Editing > Smooth**.
- Use the Elements to be smoothed tools to select a section of a part that user want to smooth.
- Select a smoothing method.
- For number of iterations, enter a number to specify the number of passes for the smoothing algorithm to run.
- Click Preview, and then evaluate the improvement of the mesh.

Smoothing Method	Description
<b>autodecide</b>	This method calculates the lengths of all of the elements' edges to find the extreme values. If the ratio of smallest to largest is below a certain threshold, autodecide uses the shape-correcting algorithm; otherwise, autodecide uses the size-correcting algorithm.
<b>size corrected</b>	This method moderates variations in element edge size throughout a mesh using a size-correcting algorithm that includes modified Laplacian over-relaxation that correctly handles mixtures of quad and tria elements.
<b>shape corrected</b>	This method moderates variations in element aspect ratio throughout a mesh using a shape-correcting algorithm that includes modified isoparametric-centroidal over-relaxation that correctly handles mixtures of quad and tria elements.
<b>angle corrected</b>	This method uses an angle-correcting algorithm that attempts to globally minimize the average deviation of element angles from their ideal values.

The following is an example of a mesh before and after smoothing:

**Before Smoothing**



**Preview After Smoothing**

