

Least Squares Transformation



Least squares is a form of regression analysis to determine the best fit of a set of data points.

$$S = \sum_{i=1}^{i=m} r_i^2$$

Where best is when the sum of squared residuals are a minimum.

By entering two sets of data into the columns marked originating and destination you will see transformation parameters at the bottom of the screen and residuals shown against each of the points. In addition we have drawn error ellipses on the plan to assist you.

By pressing ok, the data in your editor model will be transformed by each of the parameters you have selected.

Surfaces

Once again we have come up with new ways of changing surfaces on your model.

Change surface by area constrained by breaklines

This allows the user to place the cursor at a point on the model and then track around from that point until it meets a breakline. There is an option to enter a 'gate' size which is there to help you avoid it leaking out through gaps in the breaklines.

Change Contiguous surface

Allows the user to place the cursor on a point on the model where it will track around and find all connecting triangles of the same surface.

Auto Boundary

A 'convex' hull algorithm has been introduced which attempts to trace around the physical boundary of points.



Use the advanced option to view the effects of the autoboundary and change it's smoothness coefficient.

