

The logo for SVS FEM features the text "SVS FEM" in a bold, black, sans-serif font. The text is positioned on a yellow rectangular background. Below the text, there is a thick black horizontal line. The entire logo is set against a white background that has a faint, repeating pattern of light gray rectangles in the lower-left corner.

SVS FEM

Body To Body Distance ACT

Your partner in computing

Description

Modul: Mechanical

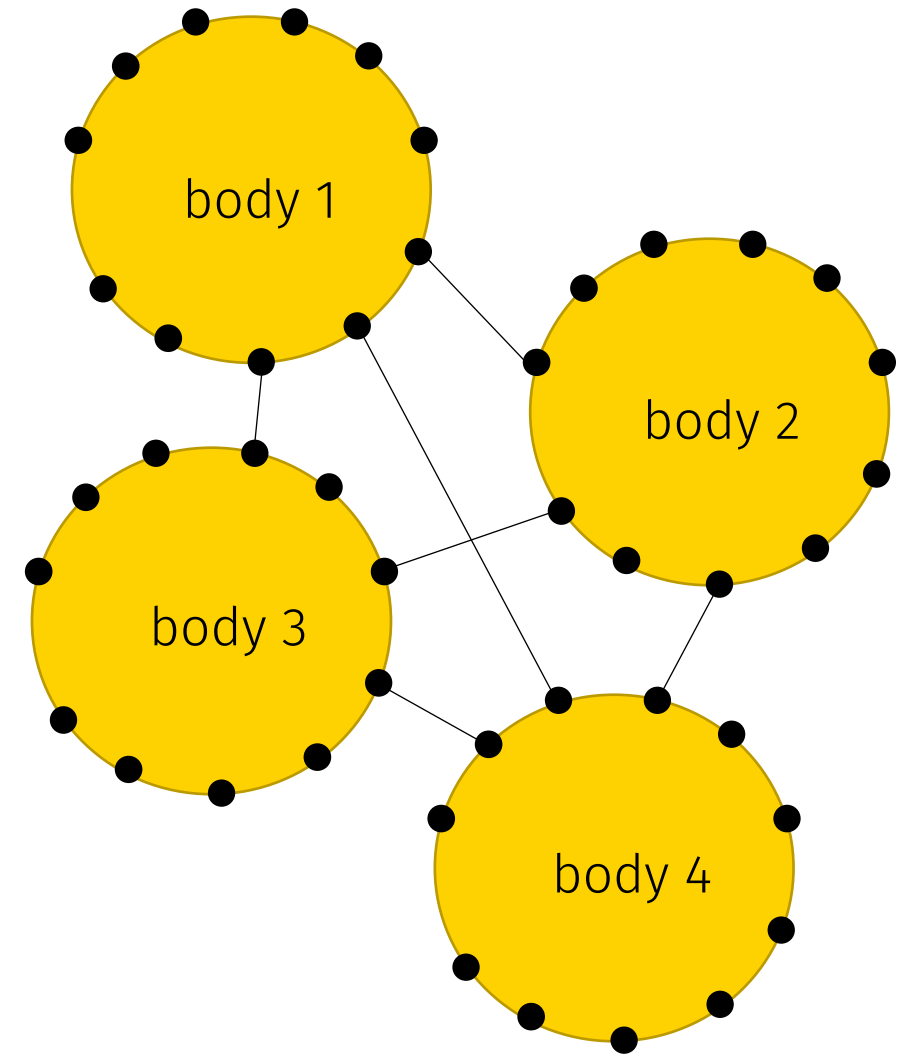
The ACT extension calculates nodal distance between all selected bodies over whole solution time history ...

Assumptions:

- 3D
- uses displacement
 - without any scale factor
 - evaluated over solution time history
- nodal distance
 - automatic dividing selection to bodies (couples)
 - node-to-node distance (nearest nodes)
 - finer mesh => more accurate distance
 - only external nodes are used
- contact penetration
 - basic Ansys contact is more precise for evaluation of small gaps and small penetration, because projection method is used

Example:

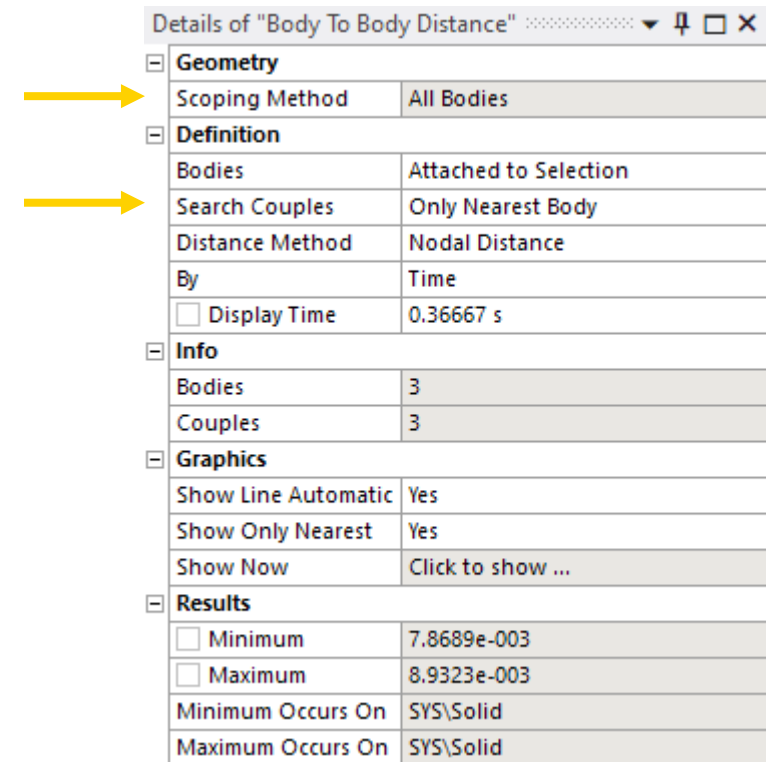
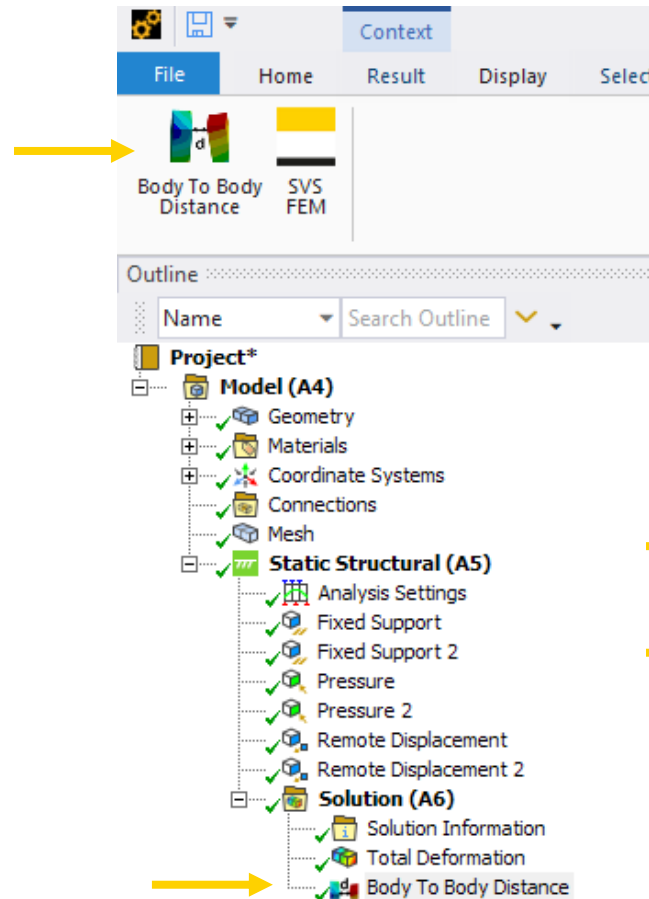
4 bodies => 5 couples => 5 distances





Workflow

1. Install and load ACT
2. Use Body To Body Distance button
3. Setup Geometry Scoping
 - which nodes will be used
4. Search Couples
 - if you would like see all distances between all bodies (each-to-each)
 - or only one distance between closest bodies
5. Evaluate the Body To Body Distance object



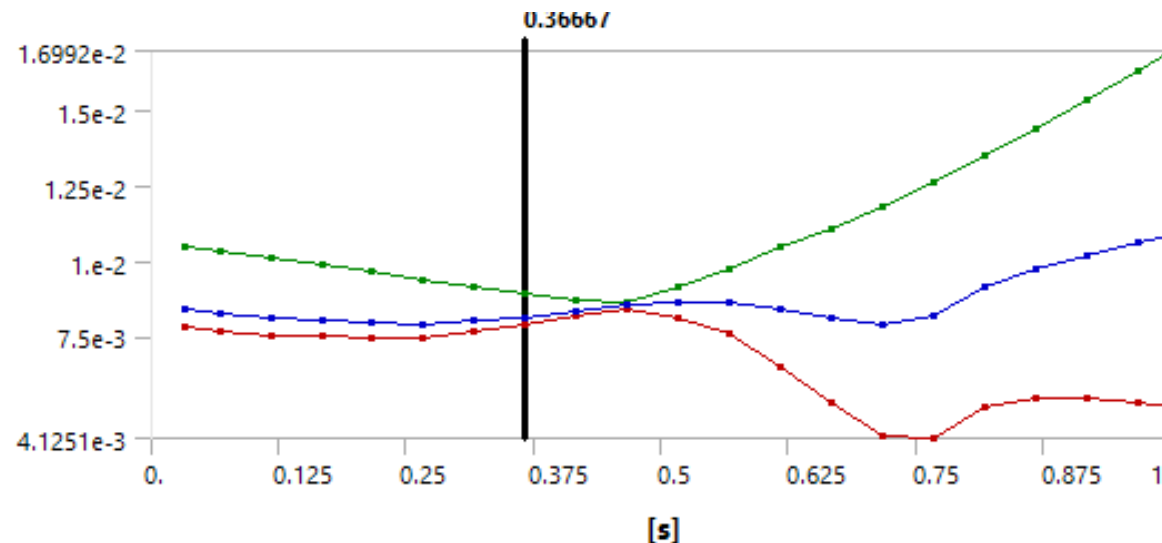
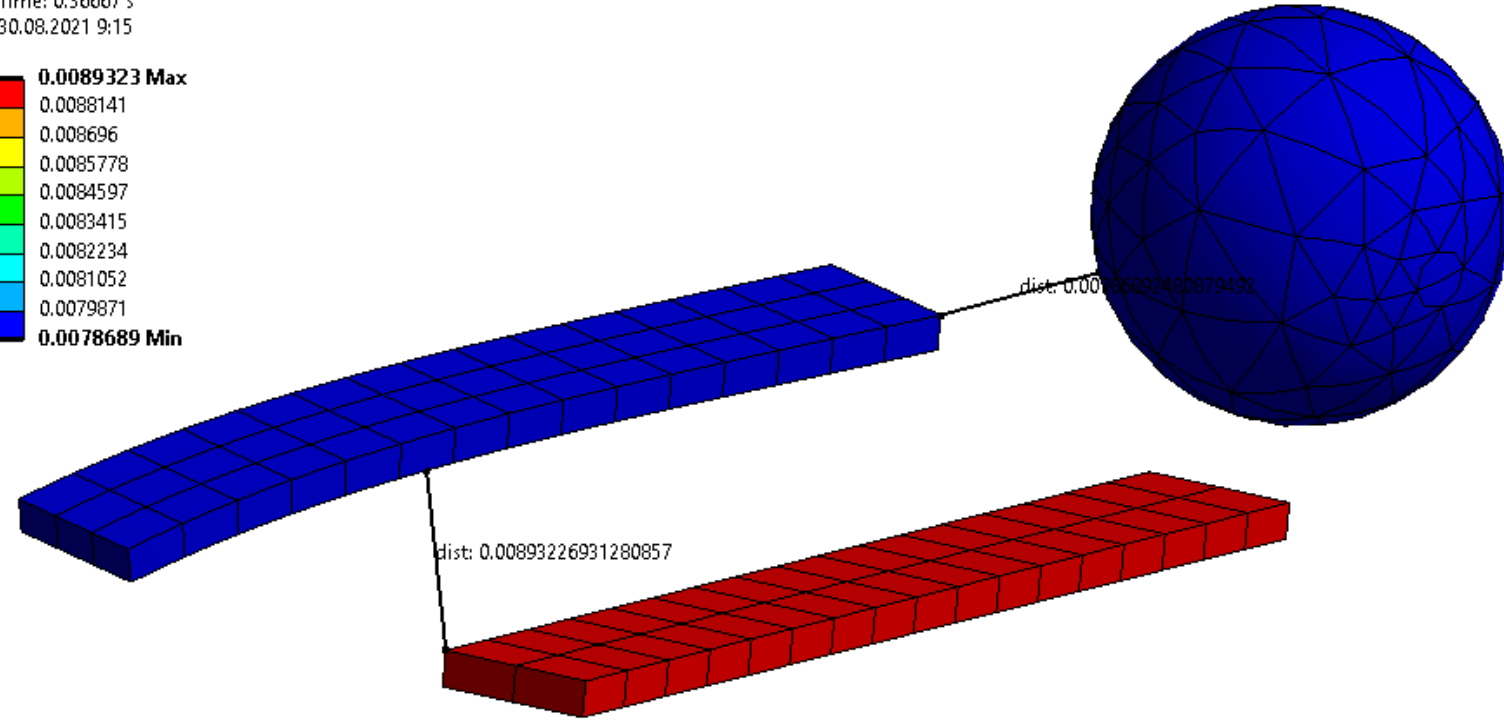


Results

1. Graph and Tabular Data
 - min-average-max distance progress over solution time history
 - retrieving a time
2. Graphics
 - contour plot where colour shows minimal distance for a body
 - additional graphics (line and text) show connecting line between closest points and writes their distance for current time point

A: Static Structural
Body To Body Distance
Expression: RES1
Time: 0.36667 s
30.08.2021 9:15

0.0089323 Max
0.0088141
0.008696
0.0085778
0.0084597
0.0083415
0.0082234
0.0081052
0.0079871
0.0078689 Min



**Thank you for using
SVS FEM ACTs**

SVS FEM

www.svsfem.cz