HEXAGON

Simufact Welding

Version 2024.2

What’s New

What’s new? – Highlights

- New **Shape comparison** tool for object catalog
- **Cooling & Clamping Only** license
- Further improvements

HEXAGON

Shape comparison for object catalog

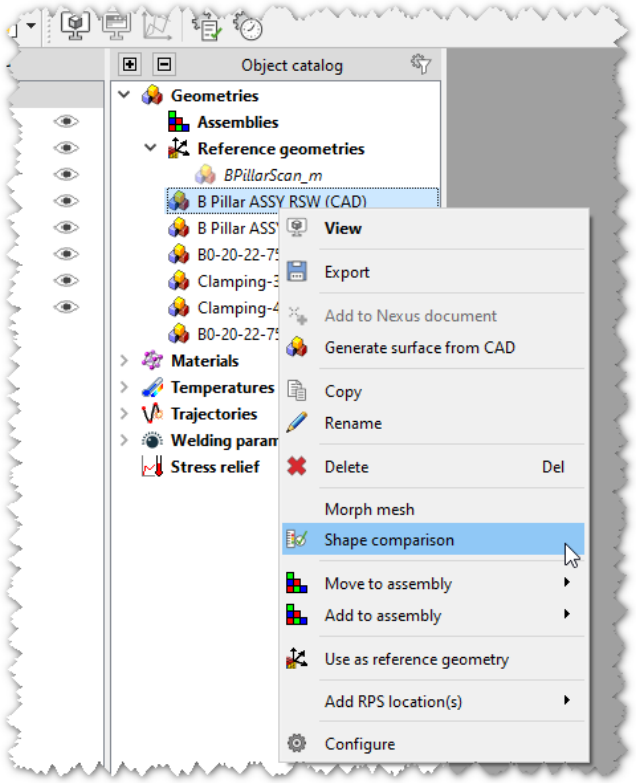
HEXAGON

New Shape comparison tool

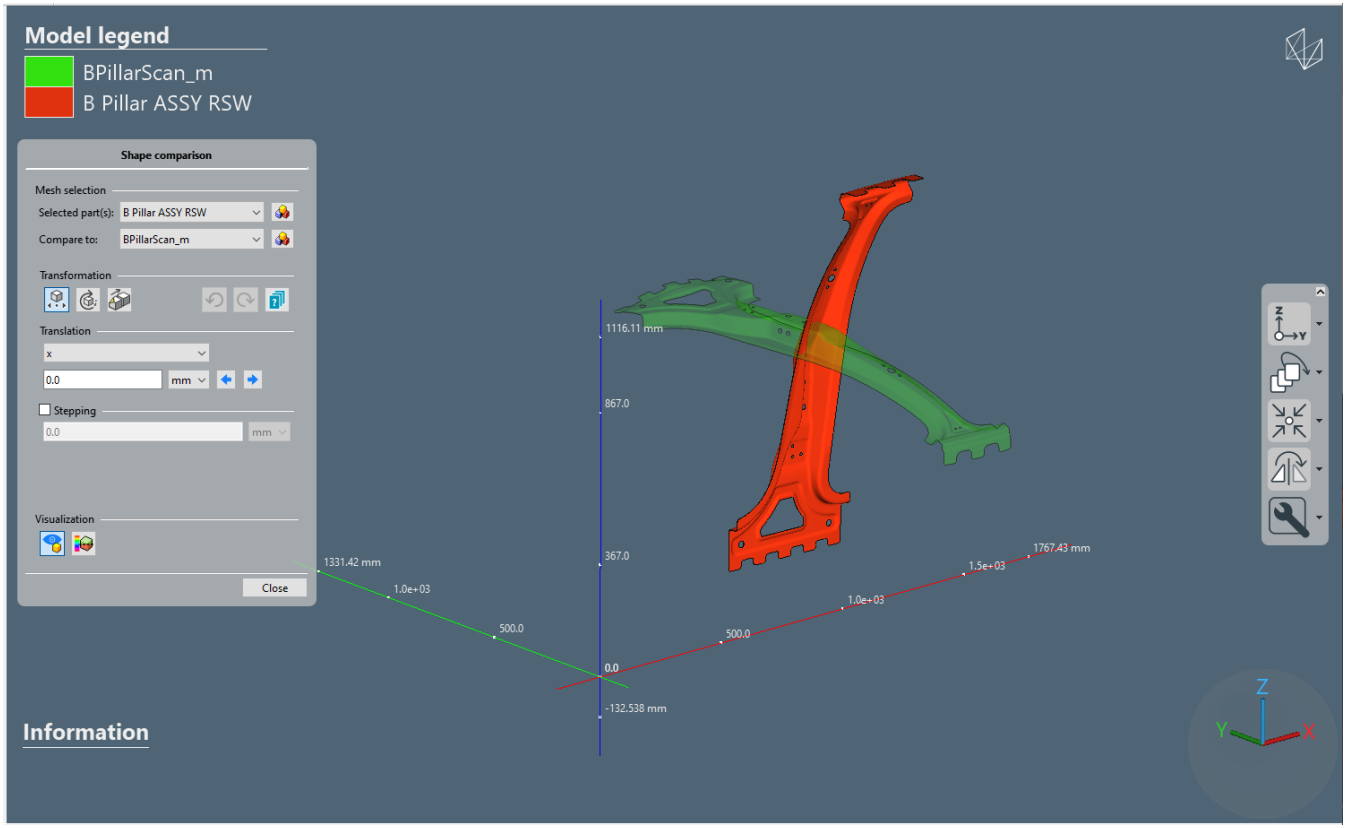
New tool is available for all geometry object **in the object catalog***

*‘legacy‘ shape comparison is still used for the shape comparison via the Results object but will be updated in the next version

Tool can be called from the context menu of any geometry in the object catalog:

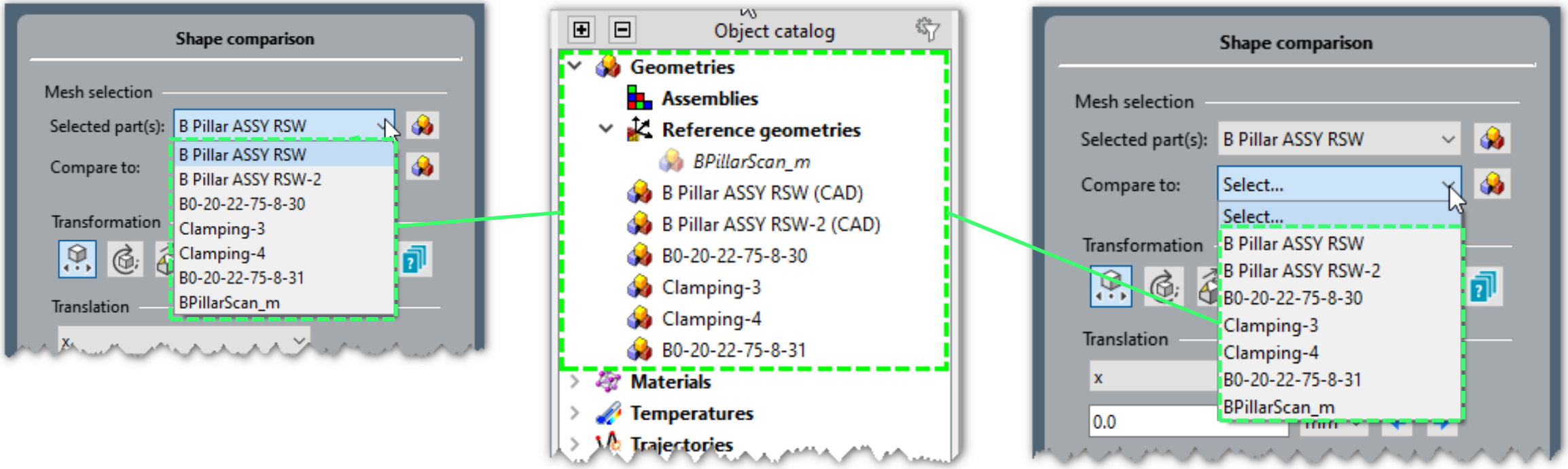


New tool design with embedded menu:



New Shape comparison tool

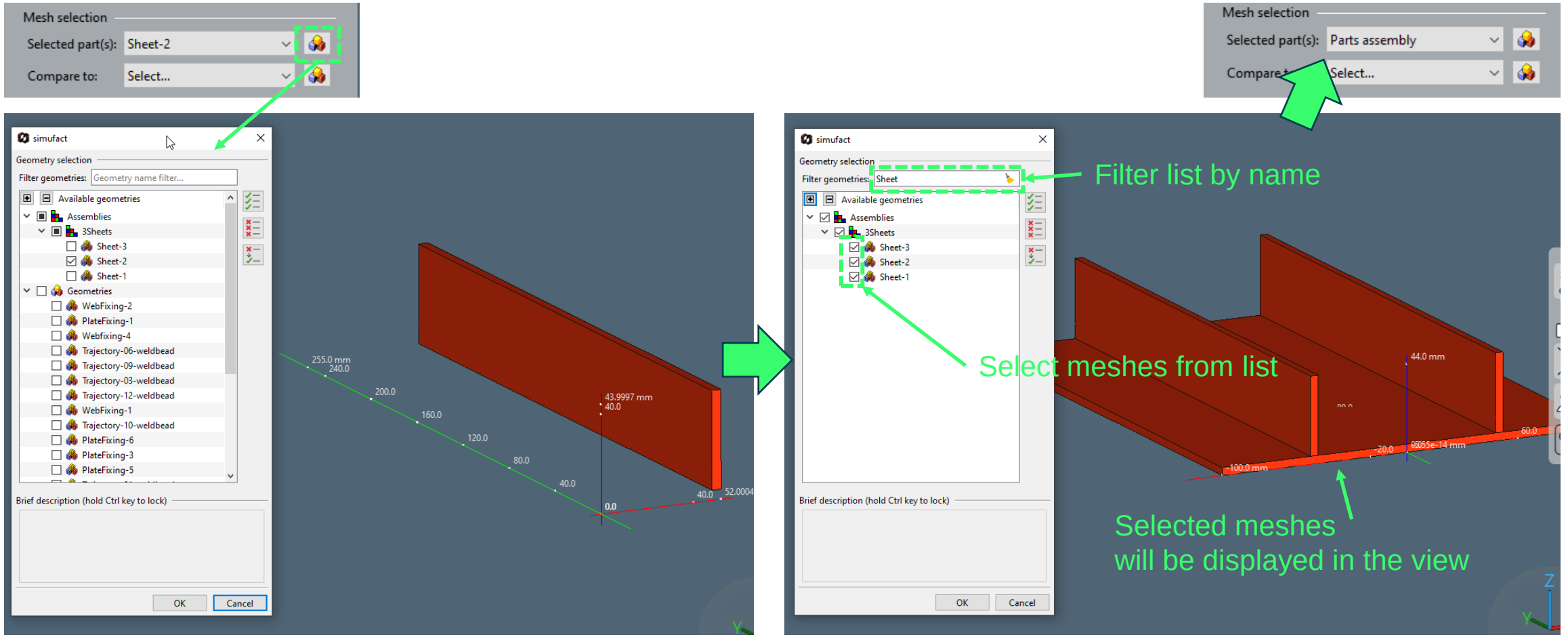
Anything from the object catalog can be selected for **Selected part(s):** and for **Compare to:**



HEXAGON

New Shape comparison tool

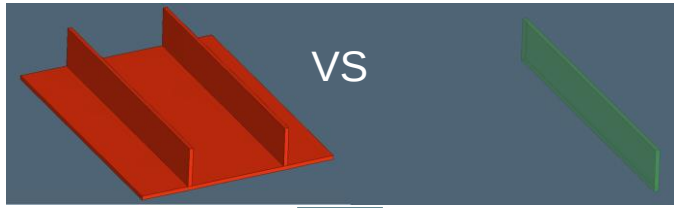
Multi-mesh selection allows to temporarily define an assembly of meshes for Shape comparison

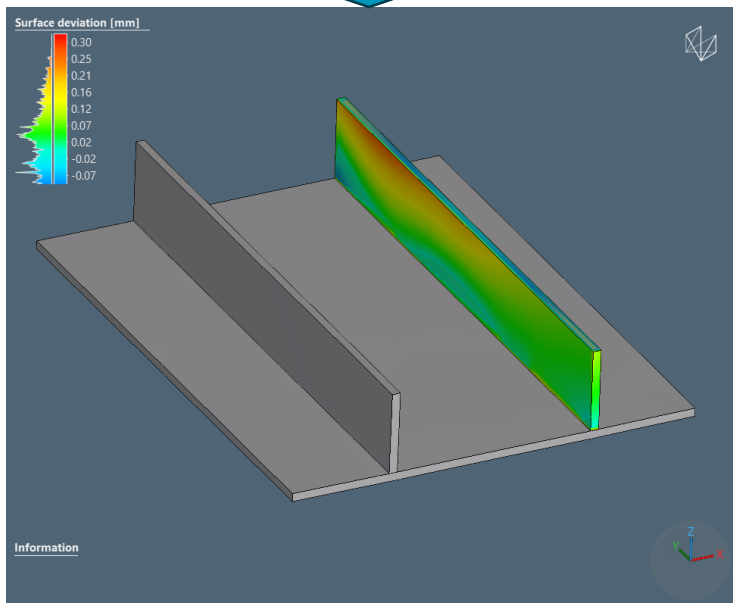


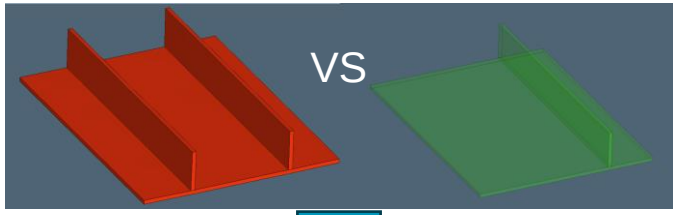
HEXAGON

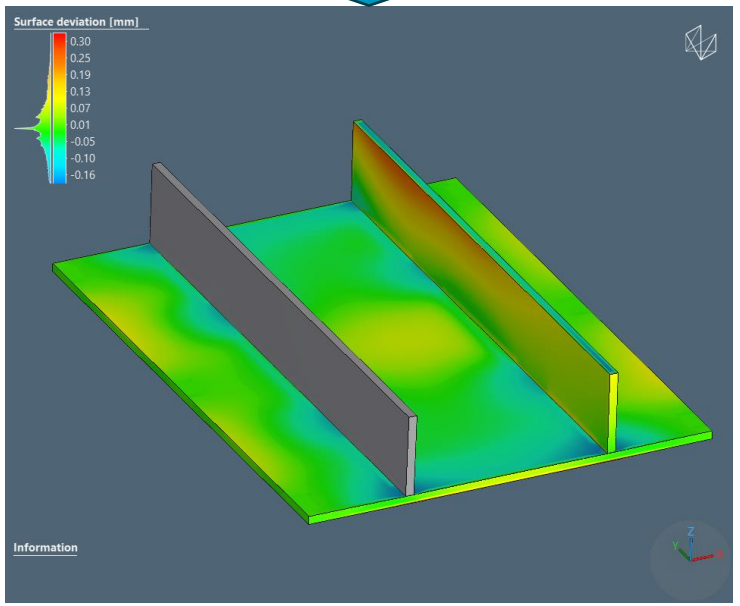
New Shape comparison tool

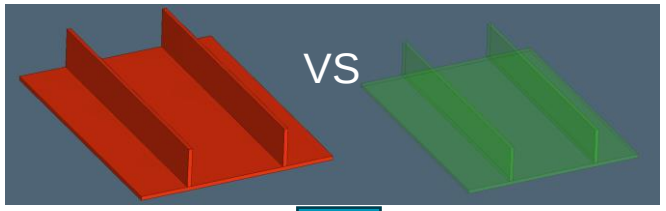
Surface deviation calculation can be conducted for any assembly combination

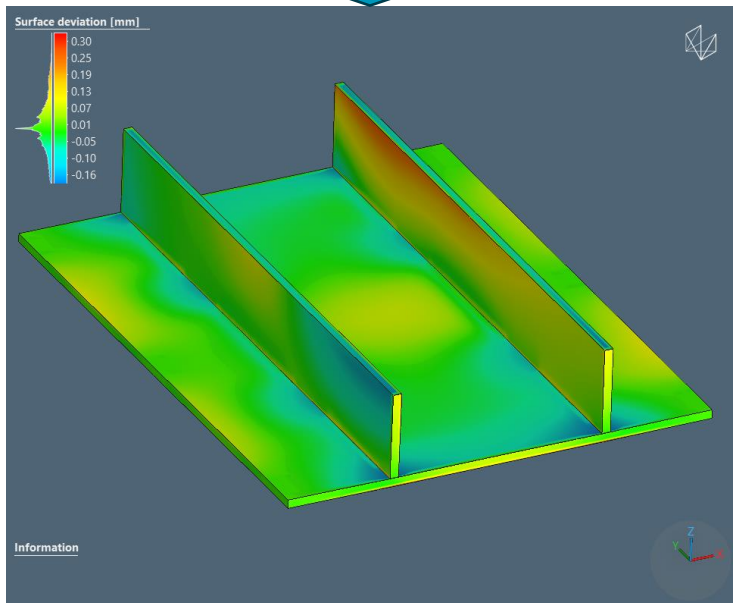










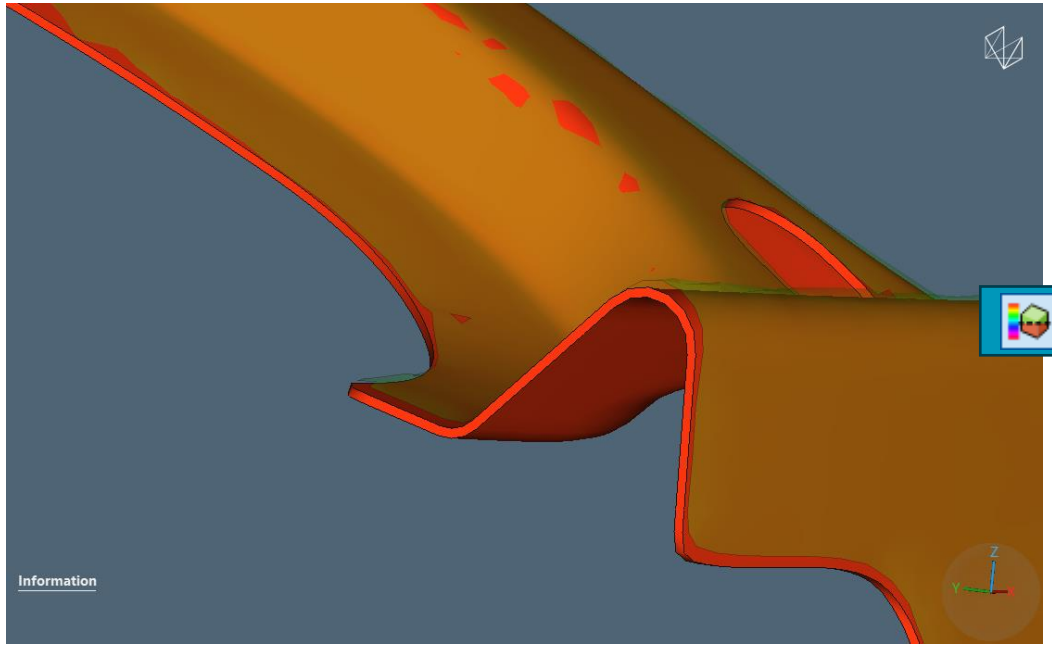


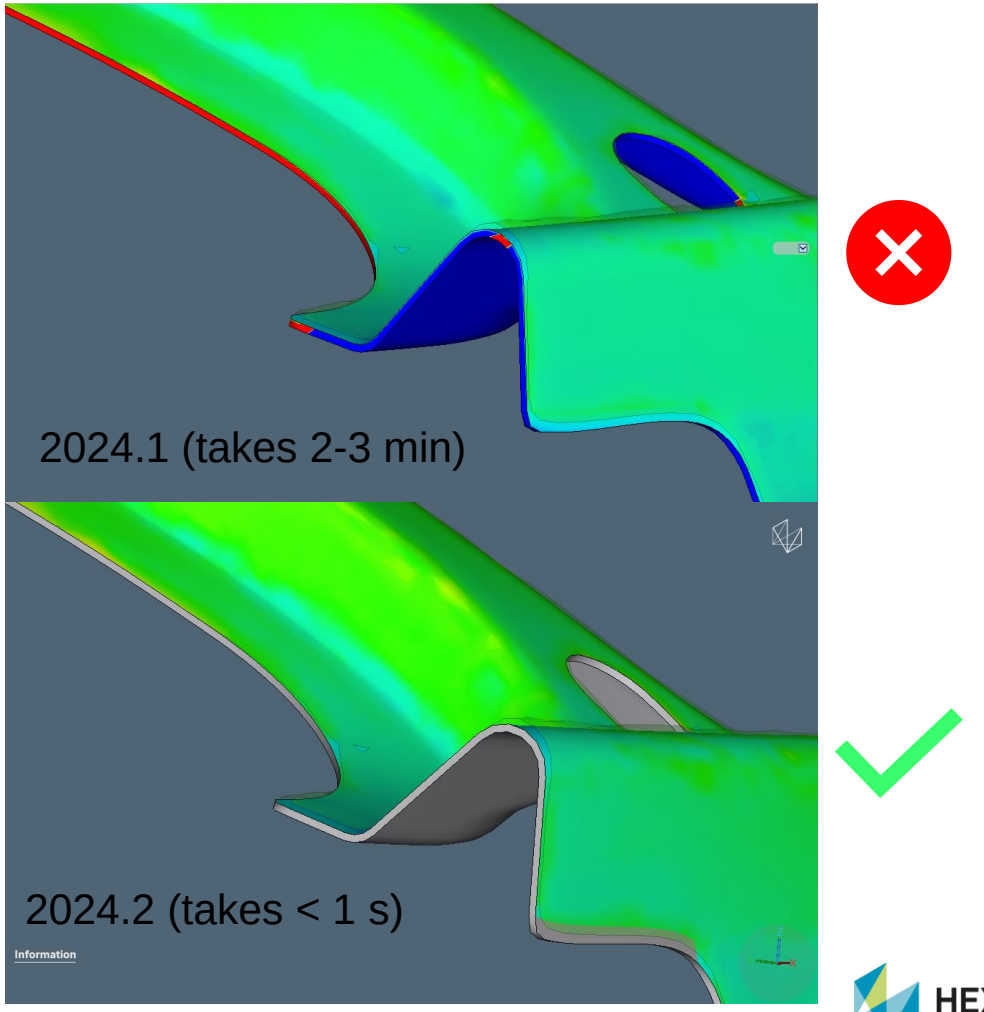
HEXAGON

New Shape comparison tool

Surface deviation calculation is now much more robust when comparing incomplete surfaces

Volume mesh vs one-sides surface mesh





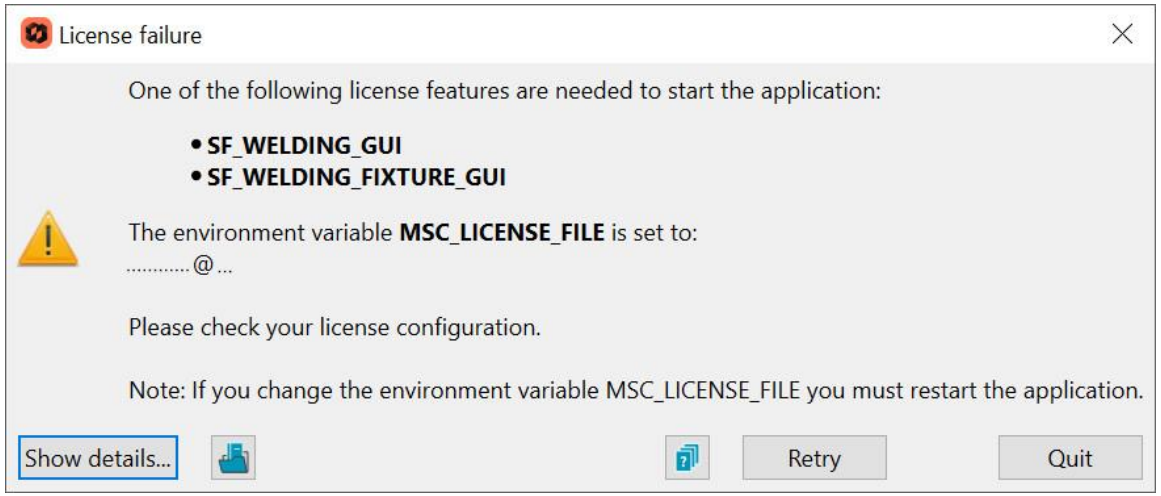
HEXAGON

Cooling and Clamping Only license

Cooling and Clamping Only license (SF_WELDING_FIXTURE_GUI)

New license feature that allows to sell Simufact Welding without HUB

- New license feature has been introduced that will be sold in a bundle with METROLOGY license
- GUI is now capable to distinguish weather the user has the HUB license or the reduced FIXTURE (C&C Only) license



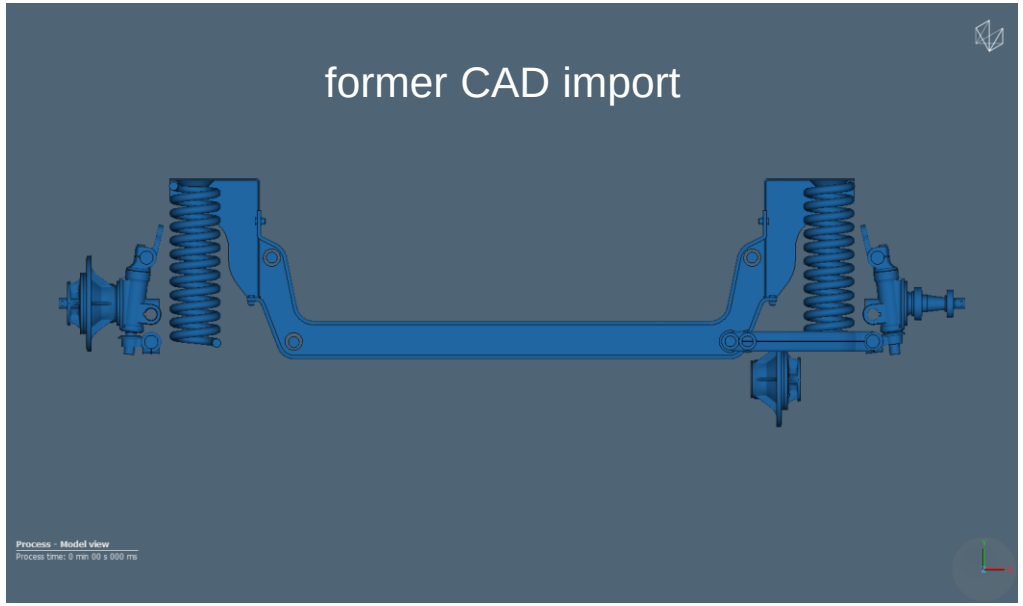
HEXAGON

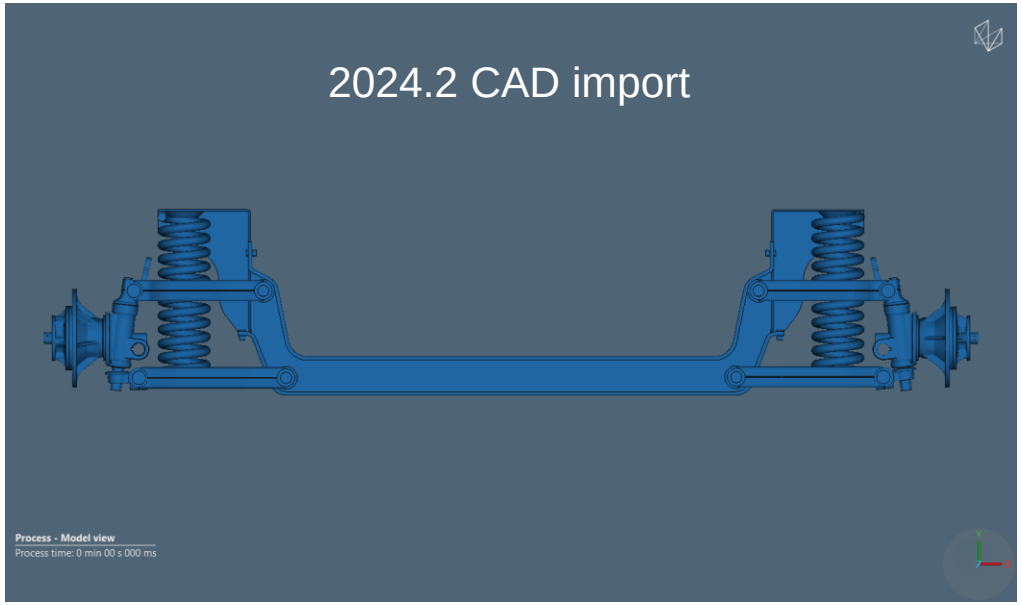
Further improvements

HEXAGON

Further improvements

Assembly structures (e.g. with transformations) in STP/STEP files are now imported correctly





Further improvements

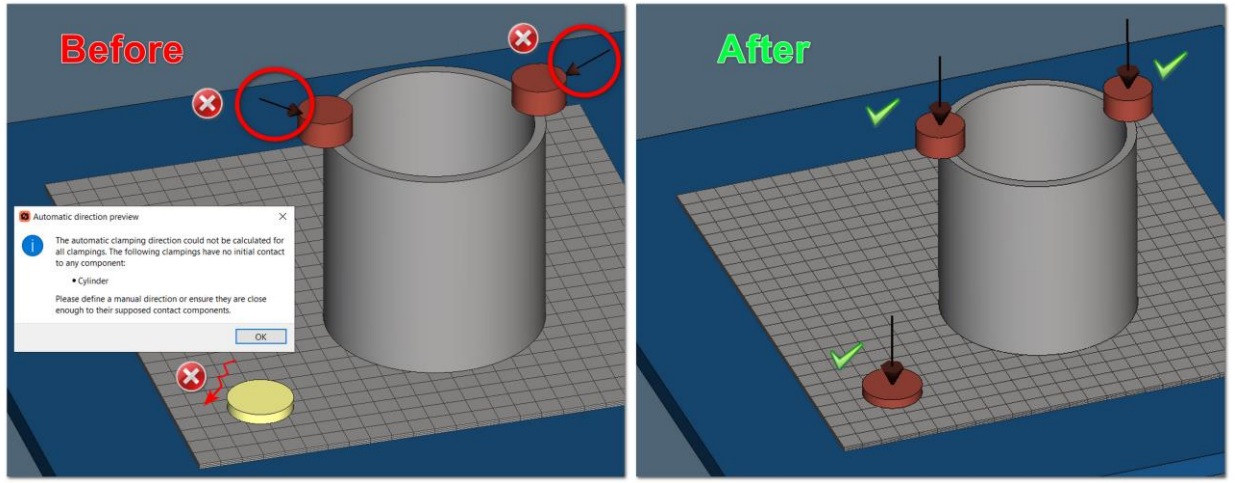
Improved GUI contact algorithm

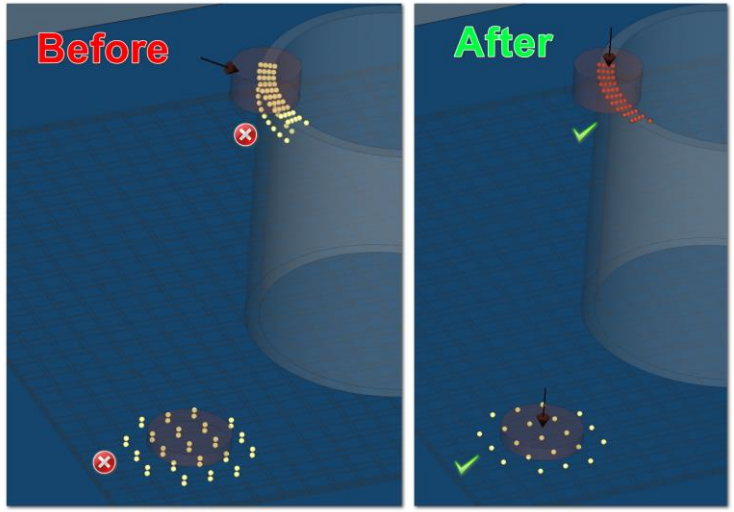
- The GUI contact algorithm now checks for fore and background to avoid detecting faces that are BEHIND another surface

- Makes using higher contact tolerances more robust

- Prevents also to falsely identify faces that are perpendicular oriented to the contacting body and are not supposed to be in contact but were previously detected with high contact tolerances

- Affects the automatic clamping direction calculation and the node collection for the ‘Apply to nodes’ option

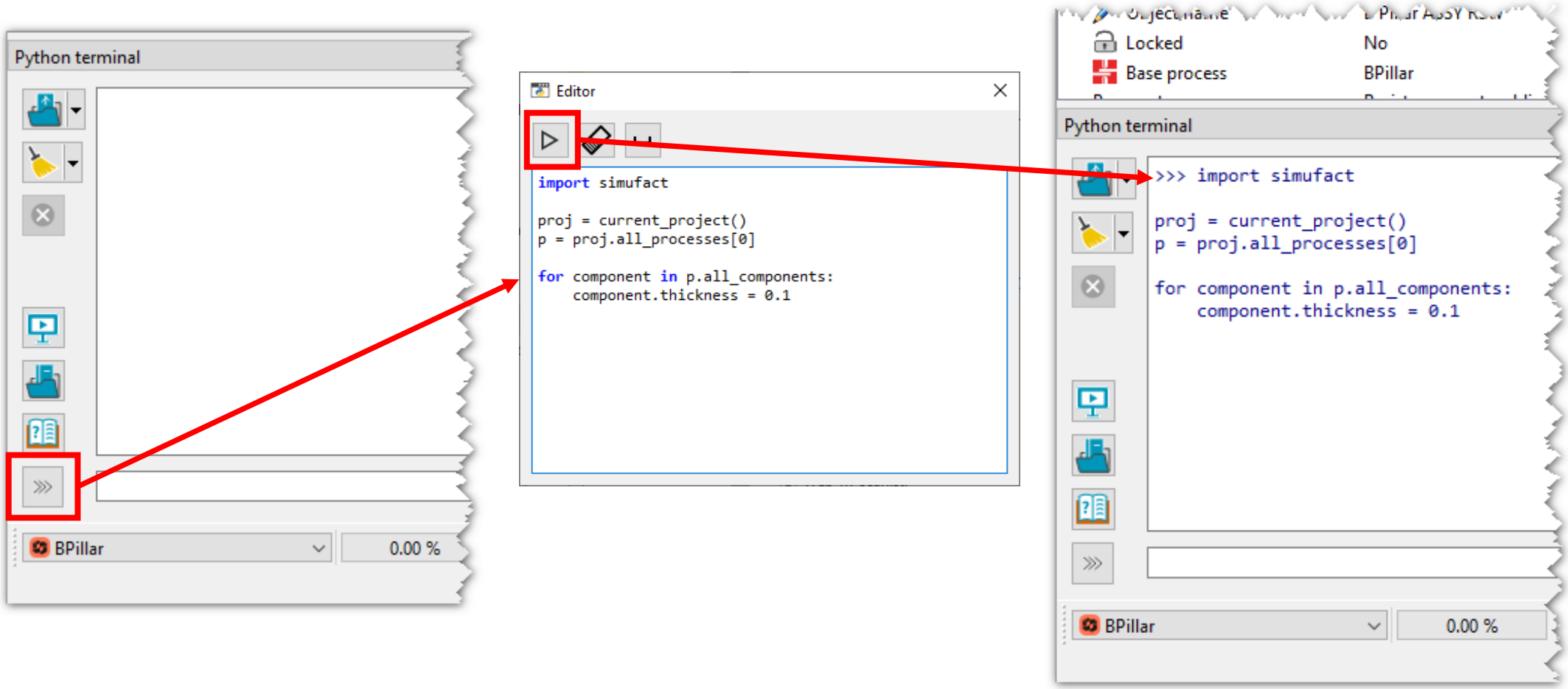




HEXAGON

Further improvements

Allow entering multiple lines at once into python console



HEXAGON

Miscellaneous

HEXAGON

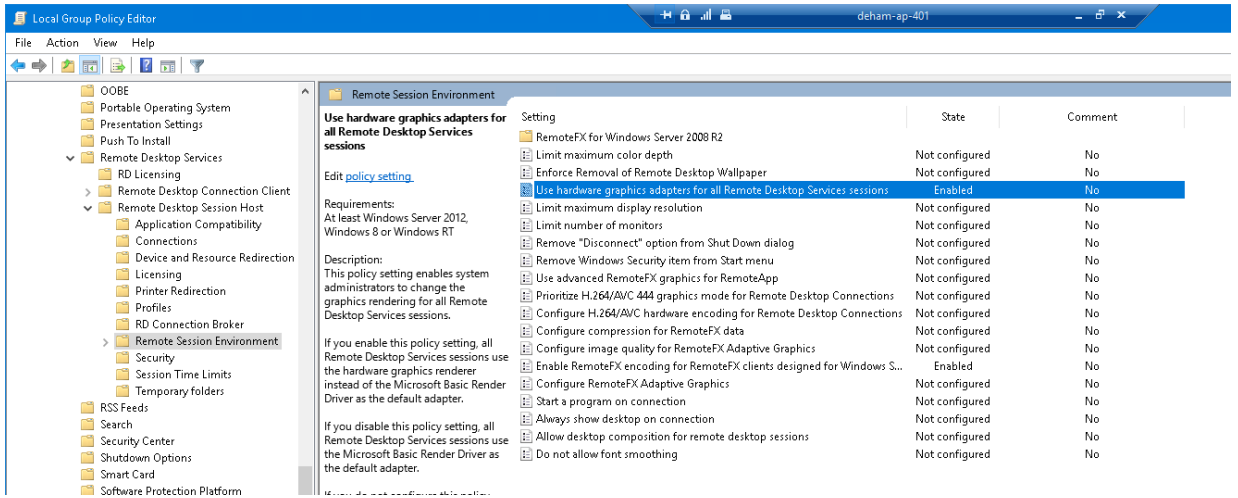
About Windows Remote Desktop connection

- We have updated underlying QT libraries to their latest versions, which do not support any more a very old fallback mechanism if no 3D acceleration for graphics is available. Therefore, if you are using Windows Remote Desktop connection, it is possible that Simufact Additive crashes during the start or when opening a project. The main reason is Windows 10 and 11 do not enable the GPU for rendering over remote desktop by default, but this can be changed by editing the Local Group Policy.

- Steps for Windows 10 and 11 are described below (these operations need to be performed on the remote computer):

  - Open the *Local Group Policy Editor* from Control Panel or use the Windows Search dialog (Windows Key + R, then type in gpedit.msc)
  - Browse to:

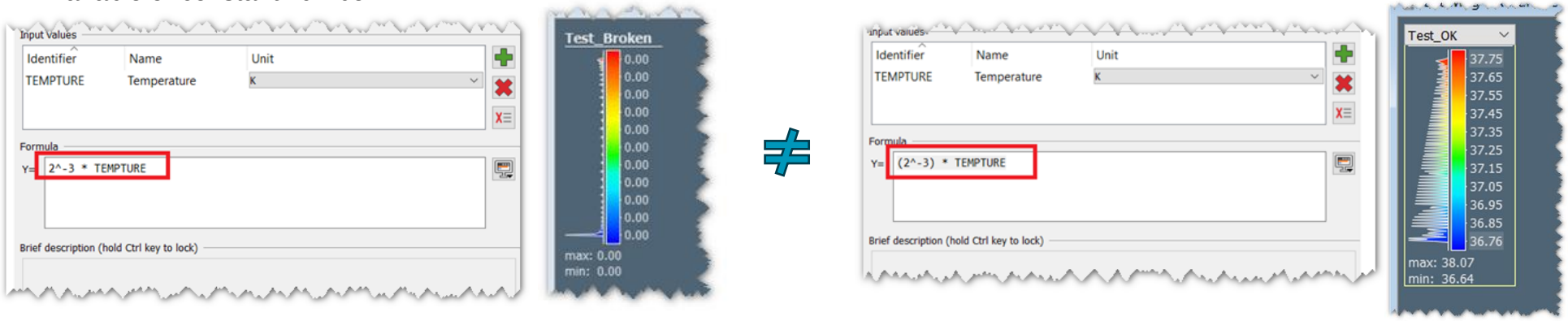
    Local Computer Policy\Computer Configuration\Administrative Templates\Windows Components\ Remote Desktop Services\Remote Desktop Session Host\Remote Session Environment
  - Then enable "*Use hardware graphics adapters for all Remote Desktop Services sessions*"
  - Update the Group policy



HEXAGON

About arithmetic formulas evaluation

- Some arithmetic formulas (e.g. user-defined result, joining optimizer, GCode import) were not correctly evaluated in previous versions
- Every expression of the following type is affected was affected: OPERATION - NUMBER OPERATION NUMBER, where
  - OPERATION = *, / , +, - , ^, …
  - NUMBER = variable or constant number
  - e.g.:



- Formulars are now always interpreted as follows (old vs. new):

Formula	Result (old)	Result (new)
2^2*2	= 4*2=8	= 4*2=8
2^(-2) * 2	= 0.25 * 2 = 0.5	= 0.25 * 2 = 0.5
2^-2*2	= 2^-(4) = 1/16	= 0.25 * 2 = 0.5
1/-1*2	= 1/-2 = -0.5	= -1*2 = -1 * 2 =-2
1/-1+2	= -1+2 = 1	=-1+2=1

HEXAGON

HEXAGON
Where Simulation Gets Real
HEXAGON