

TOPOLOGY OPTIMIZATION process description; reengineering using UGS NX

Topic: Topology optimization; reengineering the results

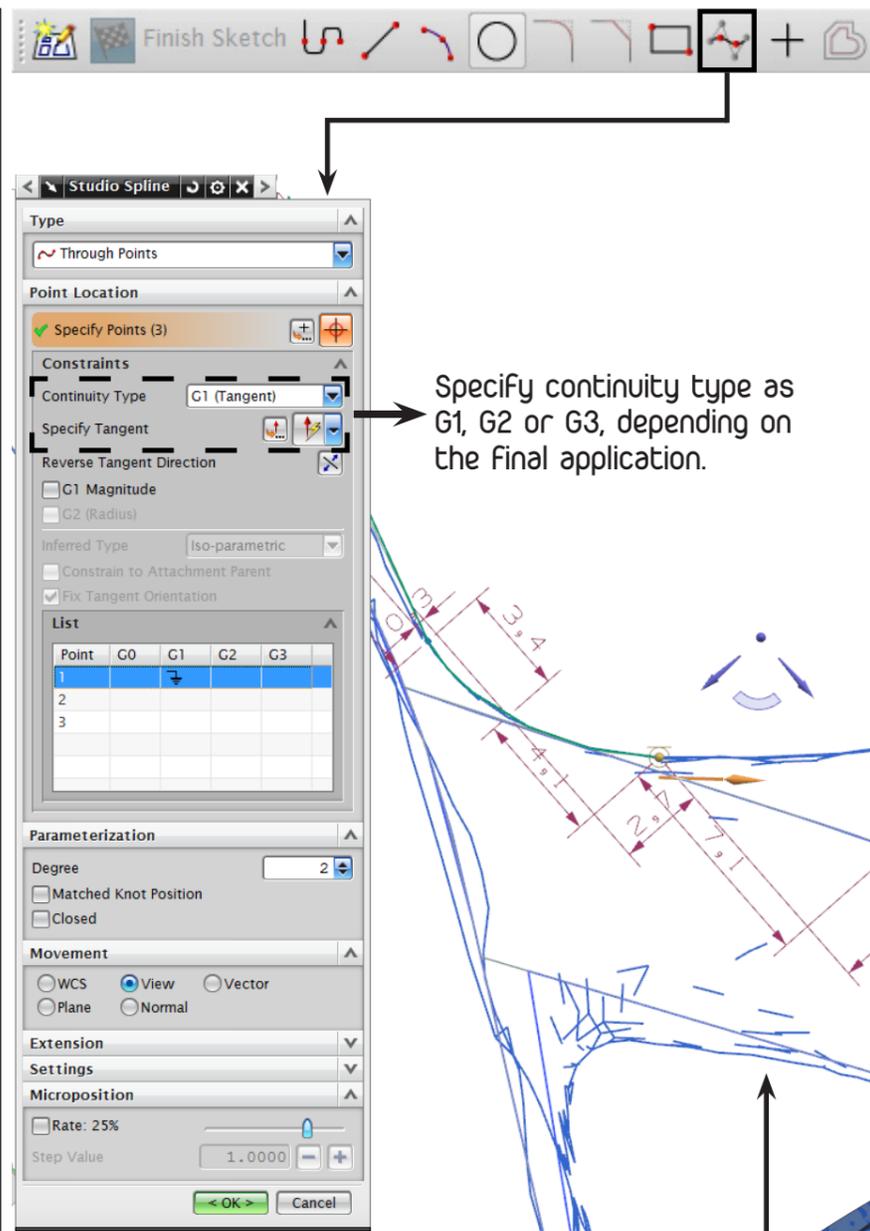
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Date: 29.05.2013

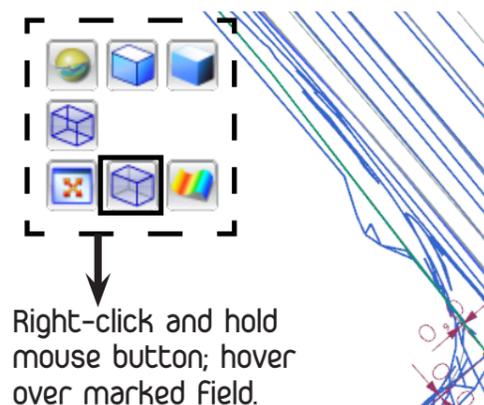
Approved by:
Terje Rølvåg

Best practice for reengineering planar symmetric parts:

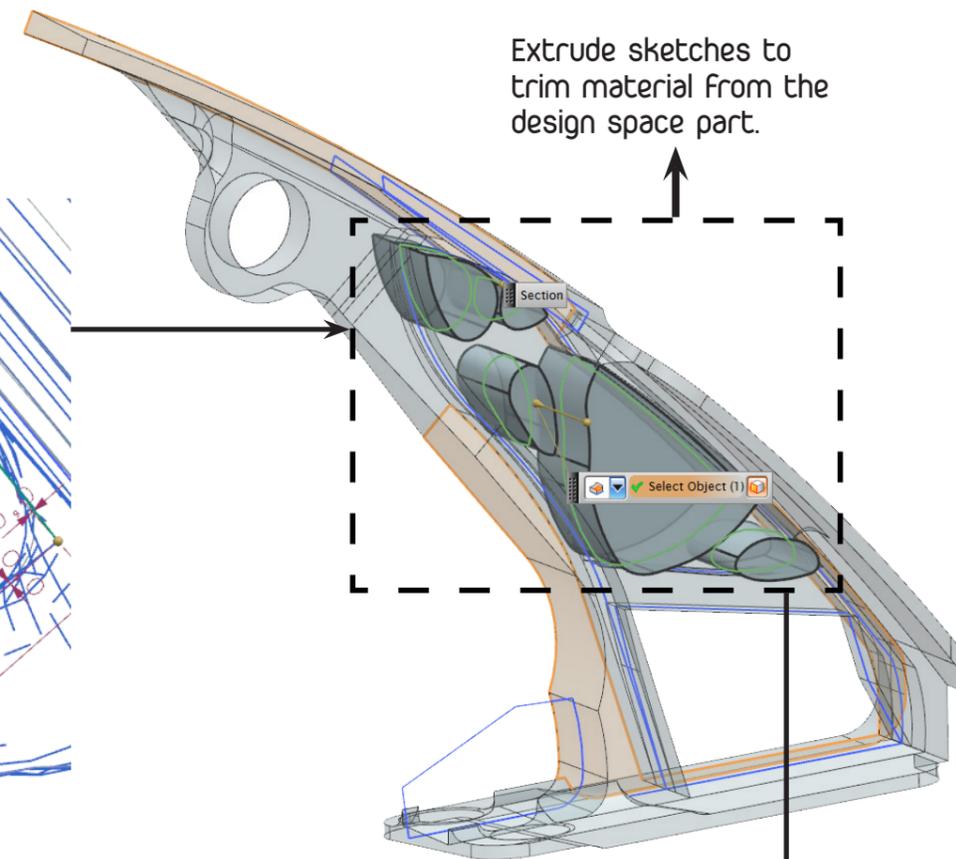
- Extract optimization geometry from preferred topology optimization software as an StereoLithography (STL)- file.
- Open the design space .prt
- Evoke the Model environment
- Create a datum plane, bisecting two parallel surfaces in the design space.
- Click File -> Import -> STL and follow the import procedure to retrieve the extracted geometry. It should normally position itself on top of the design space.
- Create a new sketch on the datum plane
- Orient view to be normal to symmetry plane
- Start the Studio Spline (click S) and position splines on top of the boundary lines in the topology optimization part.
- Extrude sketches and use Boolean: Subtract to remove material.
- Use Fillets, chamfers and other design tools to imitate results.



Specify continuity type as G1, G2 or G3, depending on the final application.



Right-click and hold mouse button; hover over marked field.



Extrude sketches to trim material from the design space part.

