

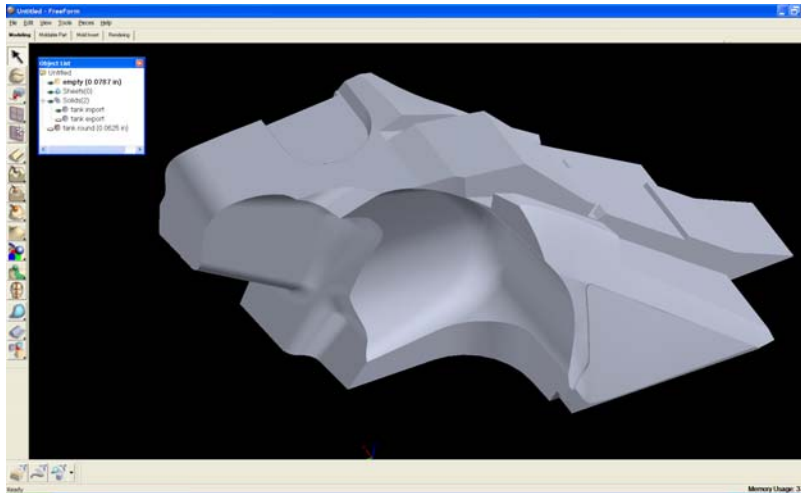
FreeForm® Modeling Plus™ v8.2 — Solutions

Solution: Fast 3D modeling of the most complex, organic shapes & the production of clean volumes

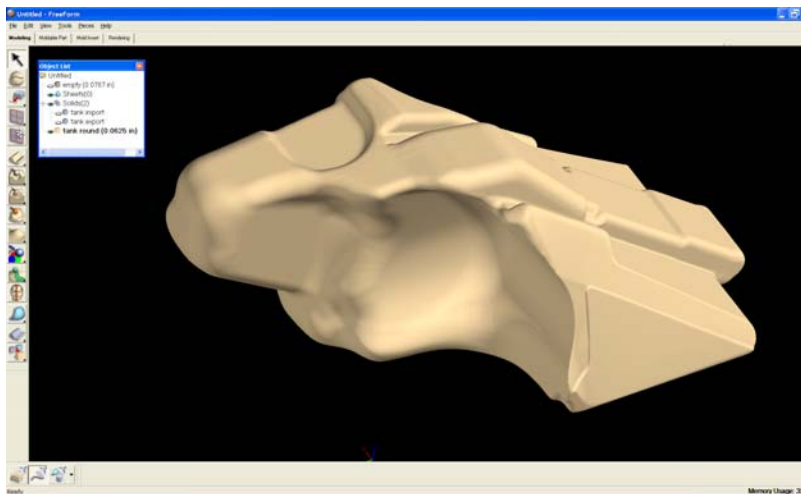
Problem: Design a plastic molded snowmobile gas tank to maximize fuel capacity. The volume extents that conform to all of the adjacent components are available in Parasolid® format.

Solution: The FreeForm Modeling Plus system is ideal for modeling the most complex, organic shapes and inherently produces clean volumes for those complex shapes. This results in error-free downstream prototyping and early and accurate volume calculations. For designs that produce shelled closed volumes, the FreeForm Modeling Plus system can quickly create fail-safe offset surfaces.

The following sequence illustrates:



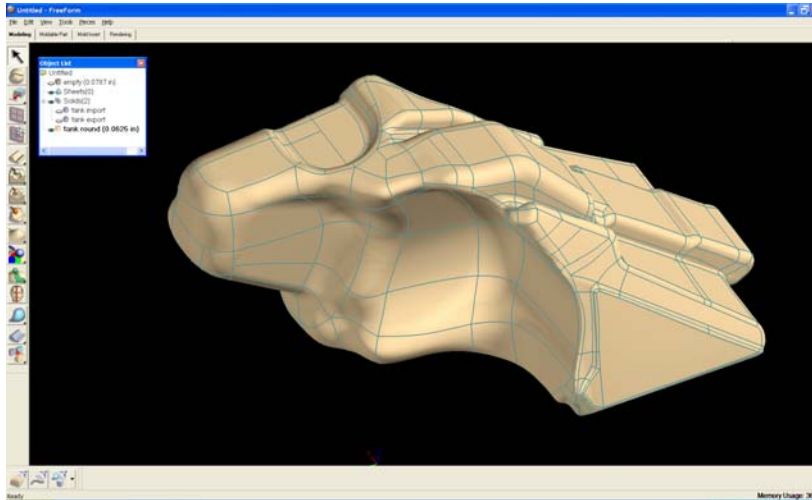
1. Import the Parasolid file that defines the available volume for the snowmobile gas tank into the FreeForm Modeling Plus system, and convert to digital clay.



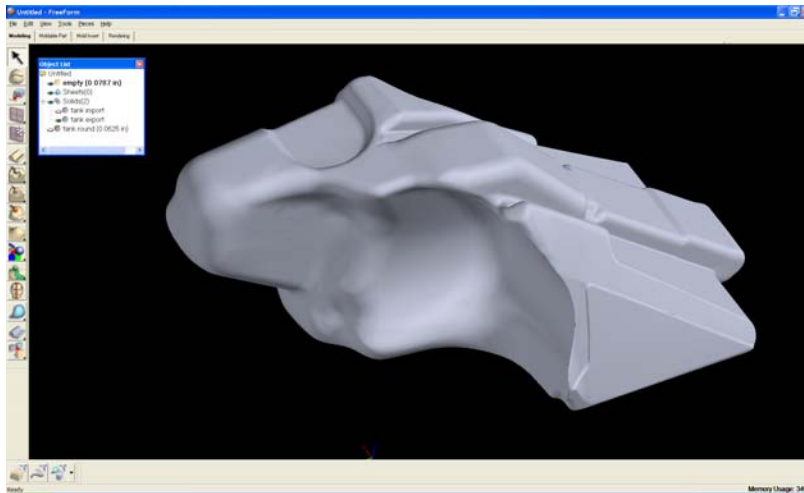
2. Based on molding design criteria and draft considerations, apply radii to sharp edges and blend and smooth as necessary using FreeForm Modeling Plus tools such as *Variable Round Edge*, *Smooth*, and *Shape*.

— More —

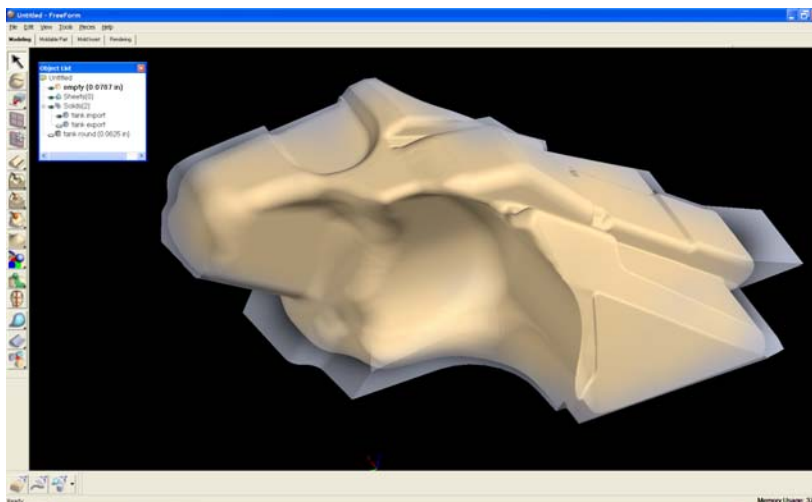
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3. Create curves and surfaces over the clay using shared tangency as the surface edge conditions.



4. Stitch the surfaces into a solid, and export from the FreeForm Modeling Plus system as a Parasolid file.



5. This image shows the comparison between the original Parasolid file that defined the available volume for the snowmobile gas tank and the final FreeForm model that maximizes fuel capacity.