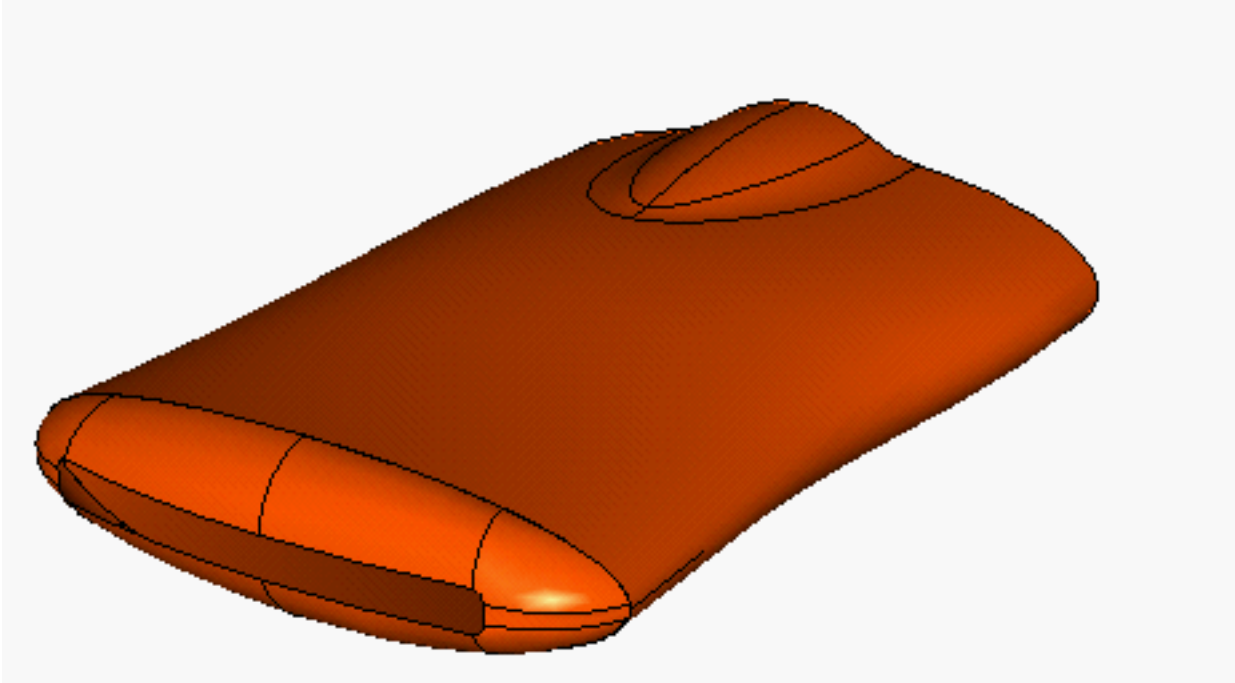
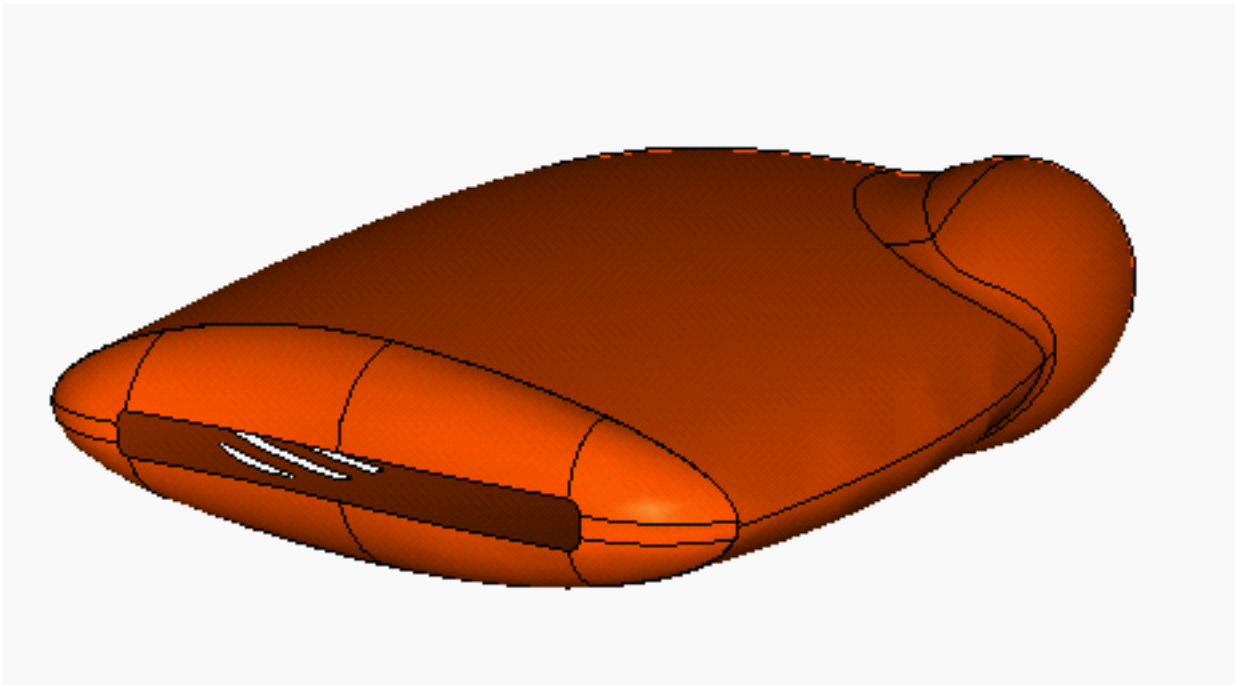
Surface Mapping Vignette

Includes Variational Sweep Example



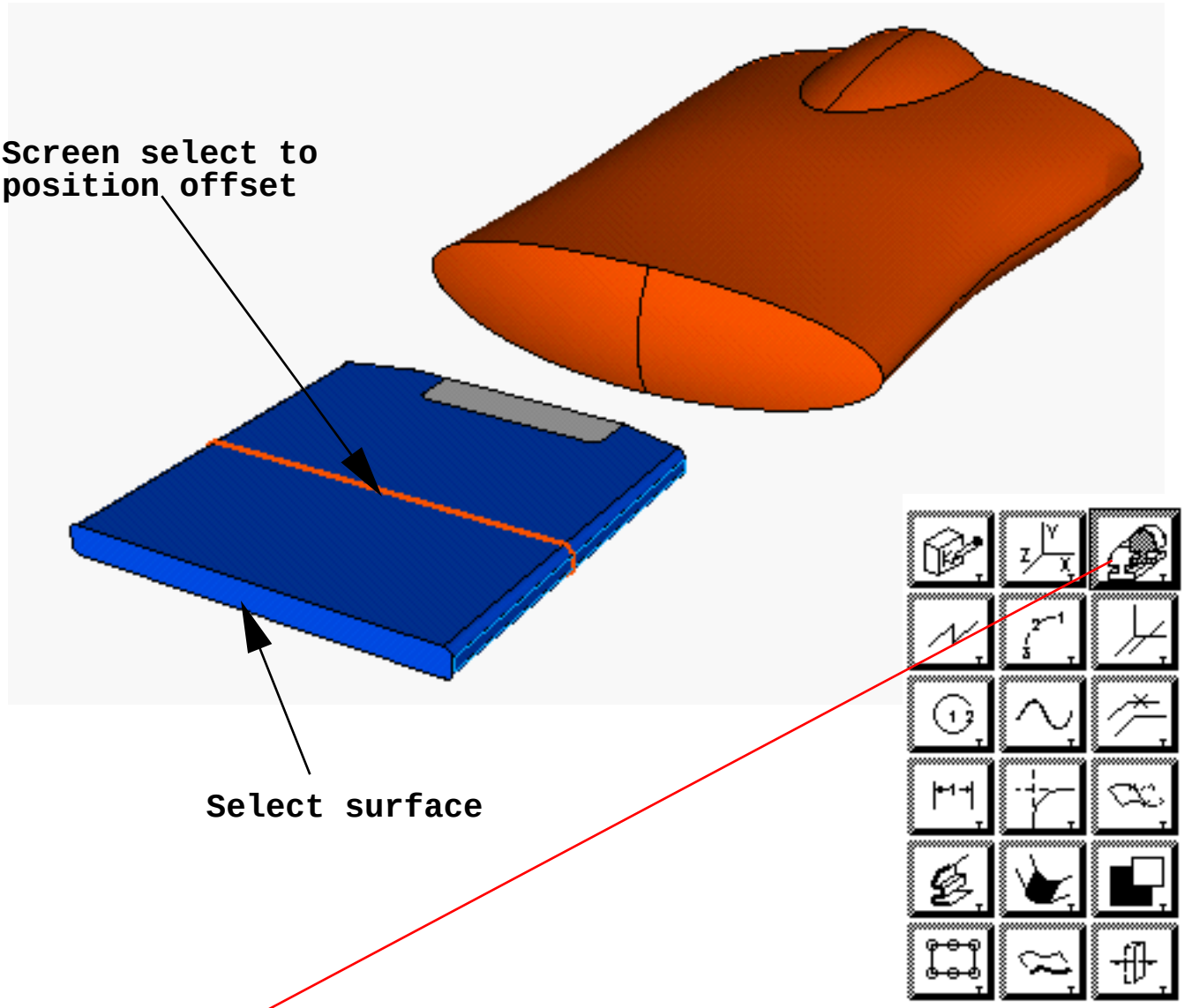


Demonstration Installation and Setup

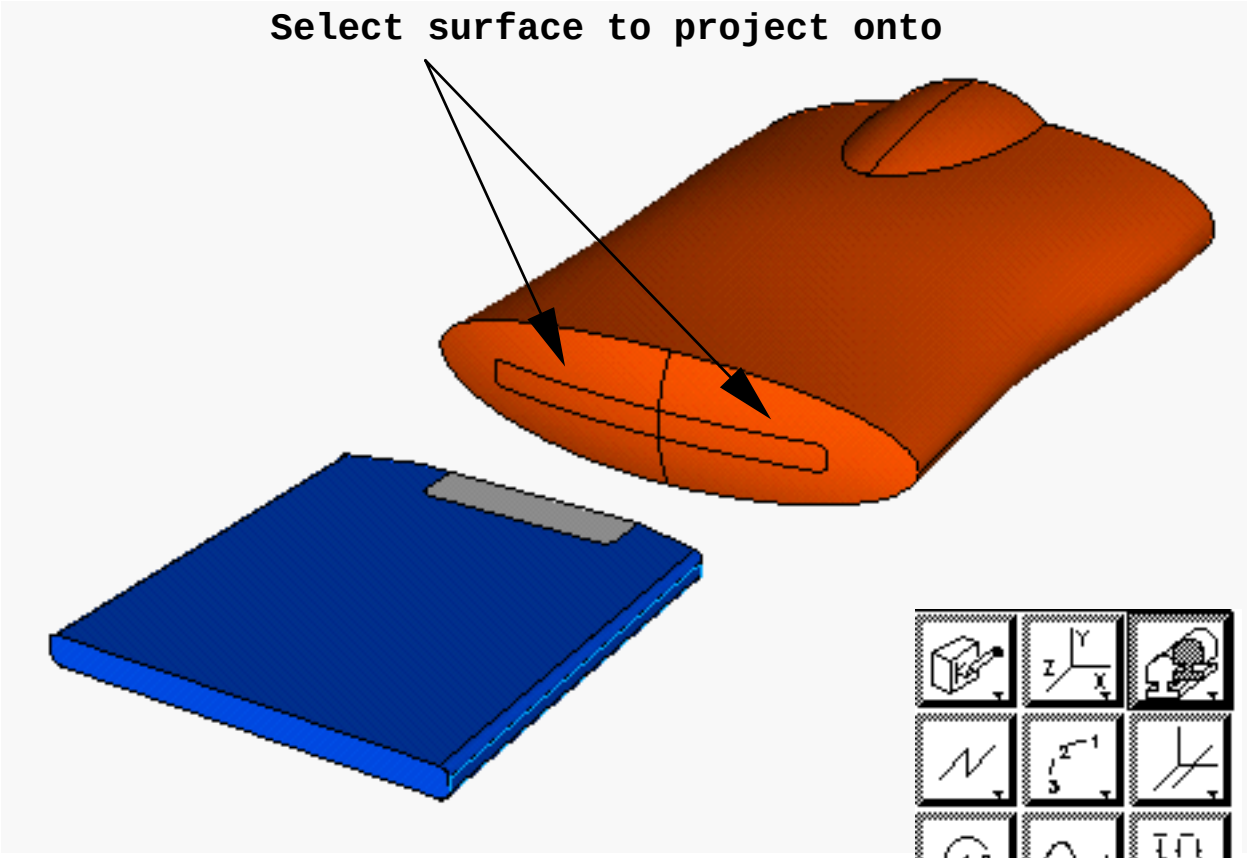
- Copy or unload the demo files to a local directory
- cd to the directory containing the demo files
- Uncompress all files if necessary
  find . –name "" –exec uncompress {} \;*
- Start I–DEAS
  Project = **Any**
  Model File = **No model file**
  Application = **Design**
  Task = **Master Modeler**
- File, Import, I–DEAS Design Universal File
  '3Dstart.unv'
- Do the following manually or run
  '3Dstart.prg'

- **Options, units, MM**
- **Display Filters, Workplane=off, Parts, Coordinate Sys=off, Centerpoints/centerlines=off, OK, Assembly, Assembly Name (Top)=off, OK**
- **Shading Options, Hardare support, Backlighting=On, OK Outline=Black, OK**
- **Line Options, Line Attributes, Iso Lines=Off, Seams=Off, OK, OK**
- **Line Options, Line Attributes, Silhouette=Off, OK, OK**
- **Manage Bins, get Initial and Cartridge parts**
- **Iso view**
- **Run the 'symbols.prg' program file**

- **Save – use any name you like, (i.e., '3DIGES')**



Select the cartridge part to section, MB2,
MB3,Options, Section on, OK
MB3, offset surface
select the rear surface, MB2, Screen Location
Drag your cursor to the middle of the part

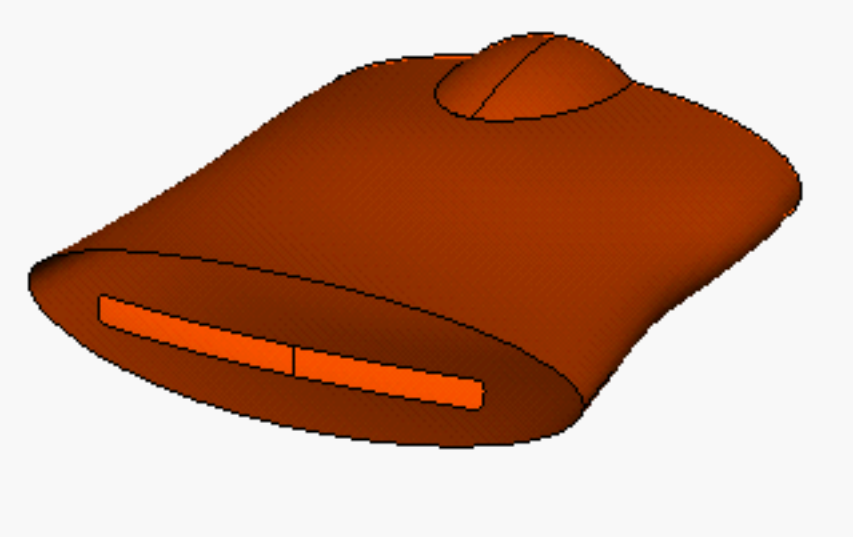


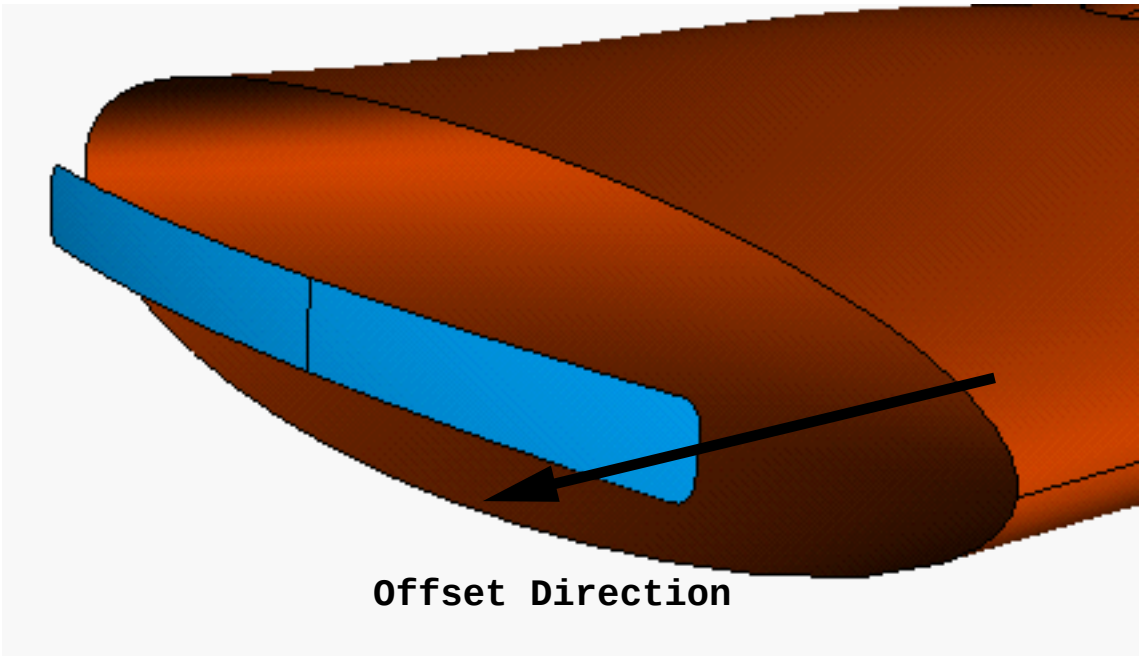
Project Curve

Pick section, MB2, select 2 front surfaces, MB2 highlidgt edges, OK

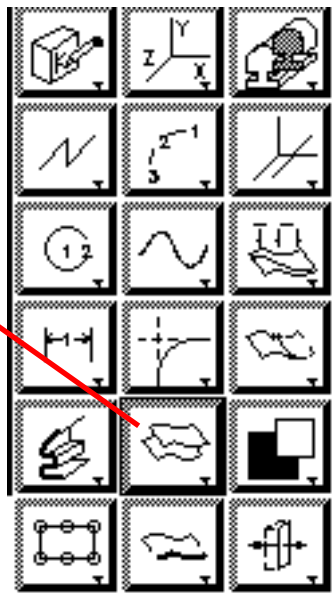
Put Away

Put away the cartridge part



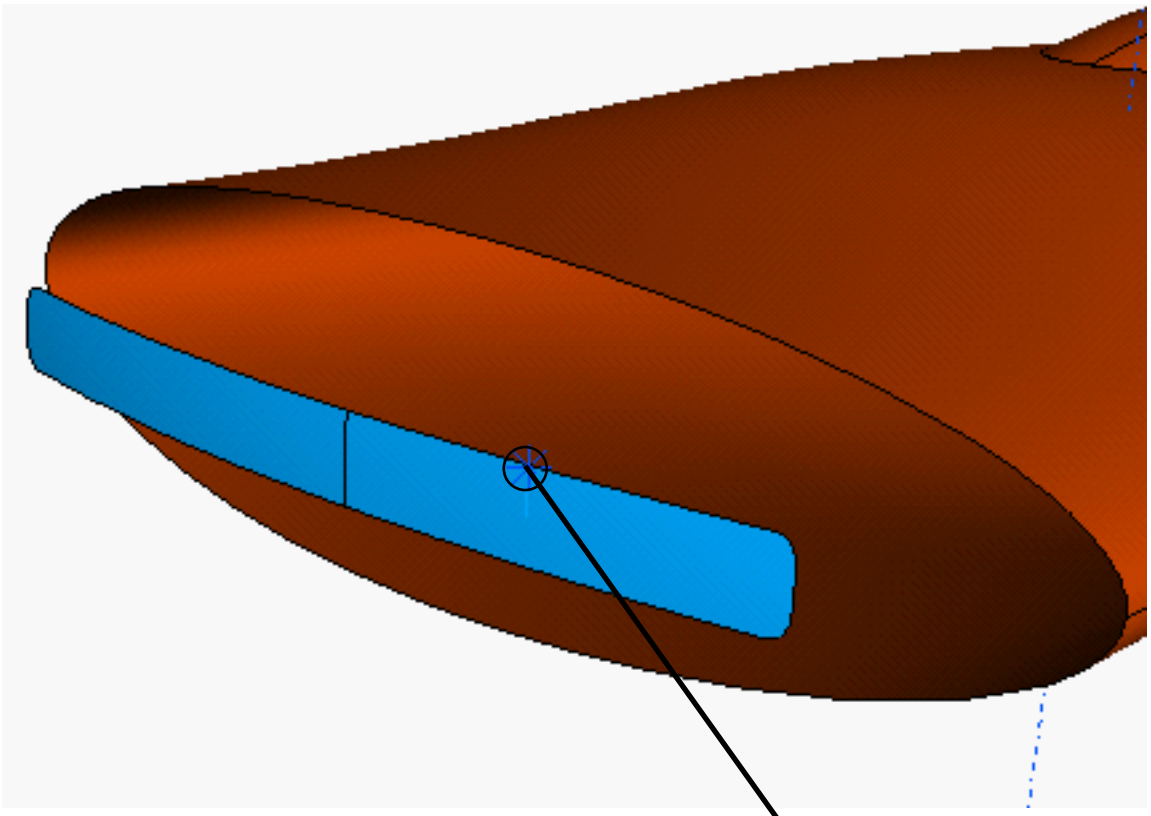


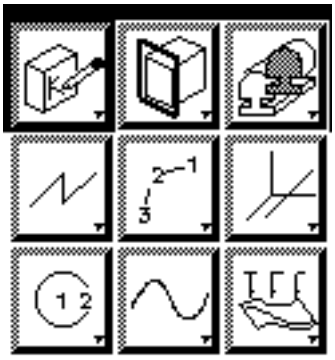
Offset Direction



Delete
Delete the two front surfaces

Offset
Select the 2 remaining front surfaces MB2, Distance = 10, flip to offset out, do not keep original or create side surfaces.



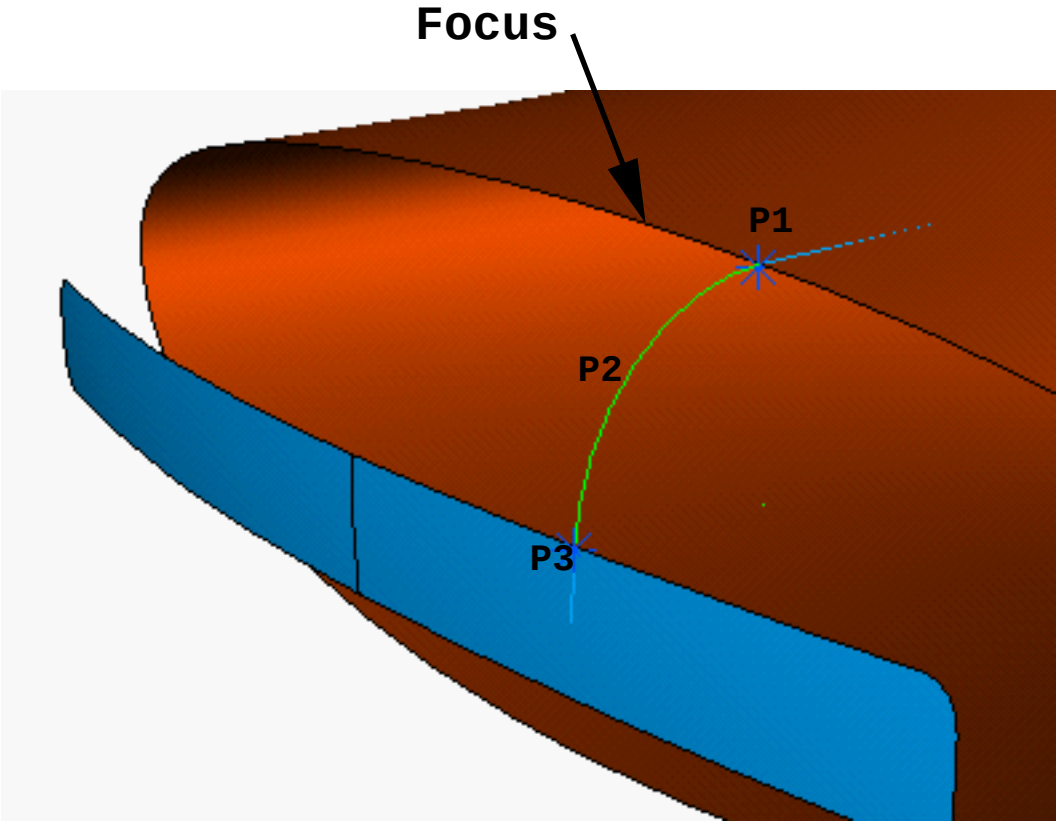


Reference Plane

MB3, On Curve, Select curve shown

Sketch in Place

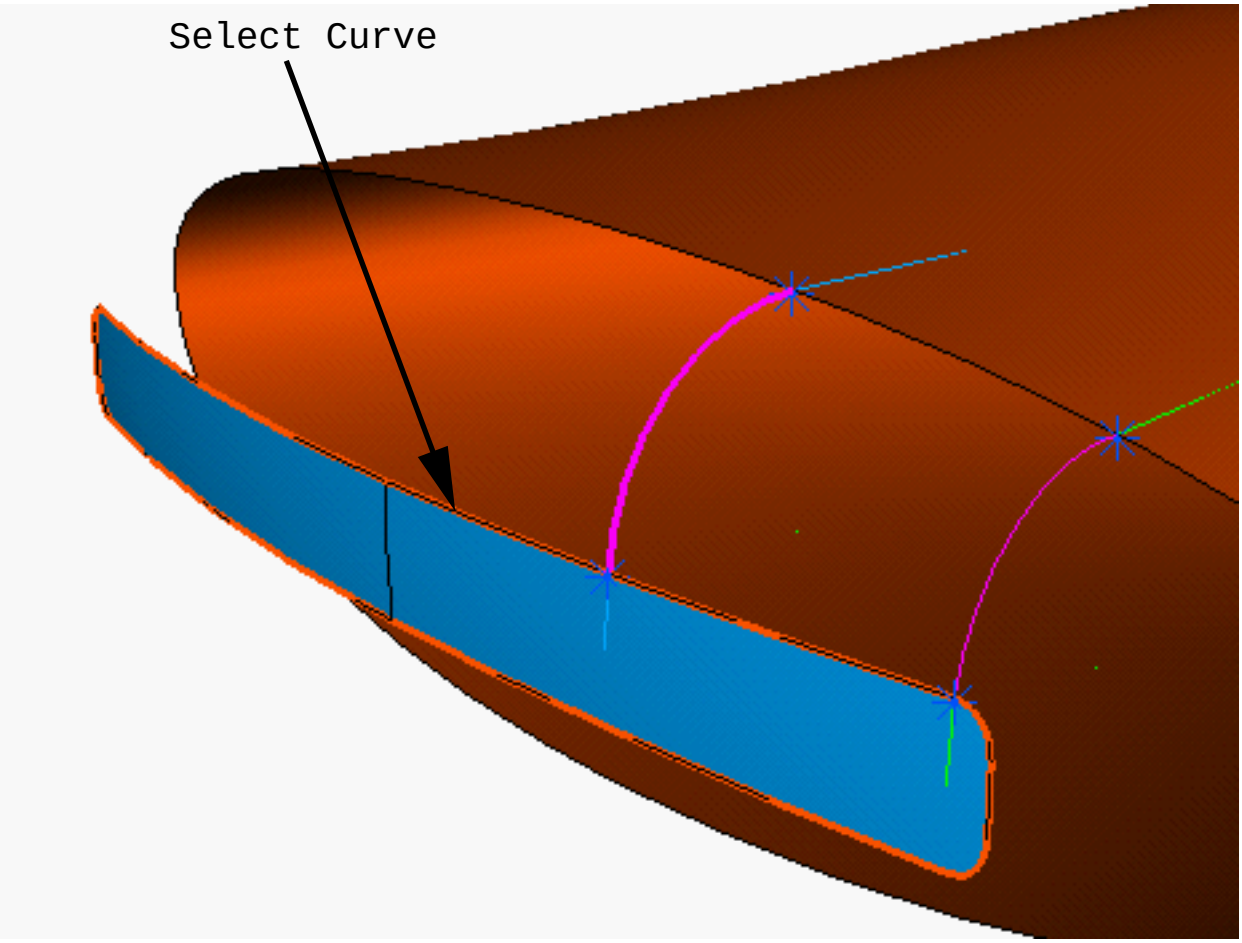
Select reference plane created



Arc, Three Points On

Select the upper point, MB3 intersect,
select the outer curve of the body, MB2,
select the blue point, a mid poiint, and
the remaining blue point.

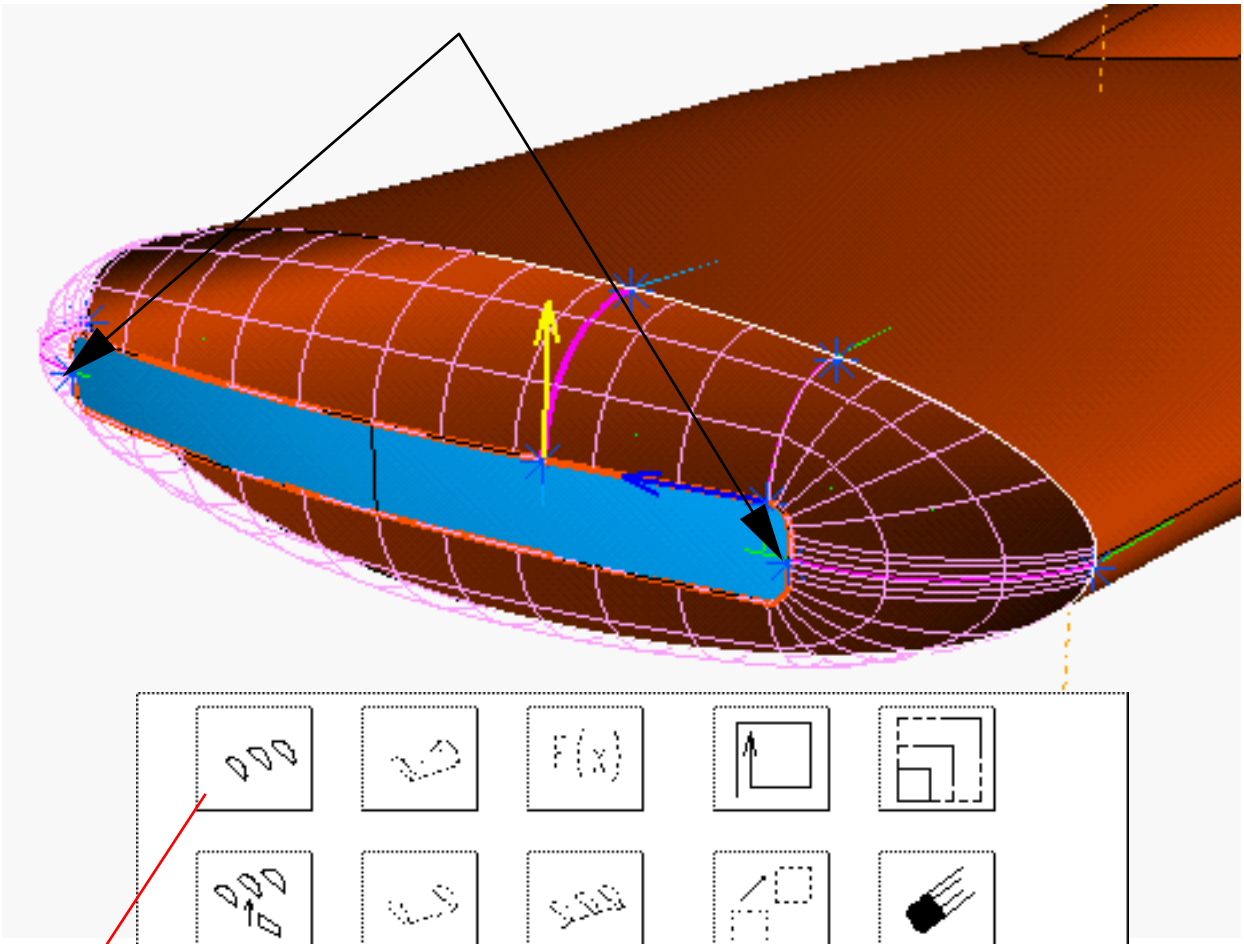
Drag the arc centerpoint to flatten the arc if necessary



Variational Sweep

Pick the curve shown as the path curve, MB2,
Select the arc as the section, deselect the additional lines at each end if needed, MB2,

----------SEE NEXT PAGE----------

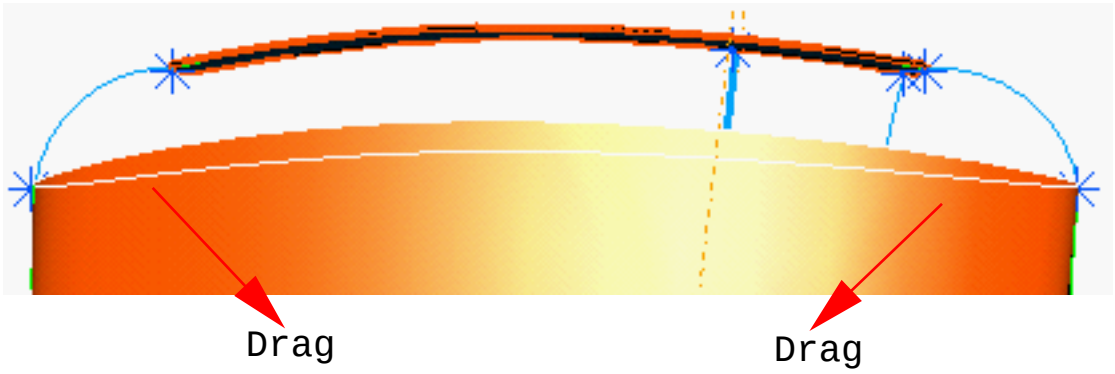


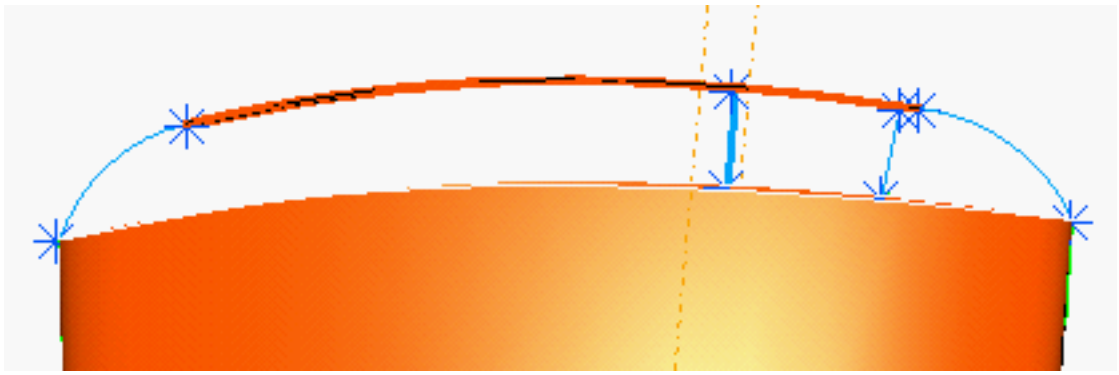
Rotate to side view of preview – Indicate need to modify sweep at outside locations – Curvature too great

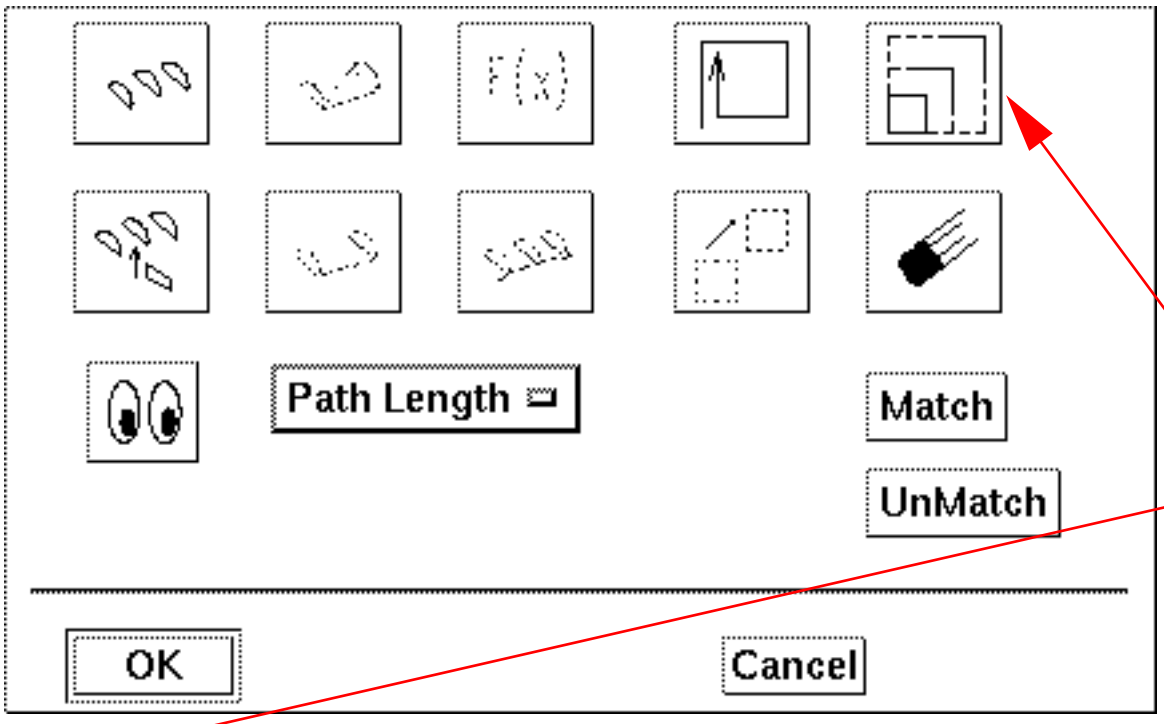
Add edit plane

Navigate to the midside location on each end of the sweep to add edit plane. Highlight section preview capability

(Next Page)

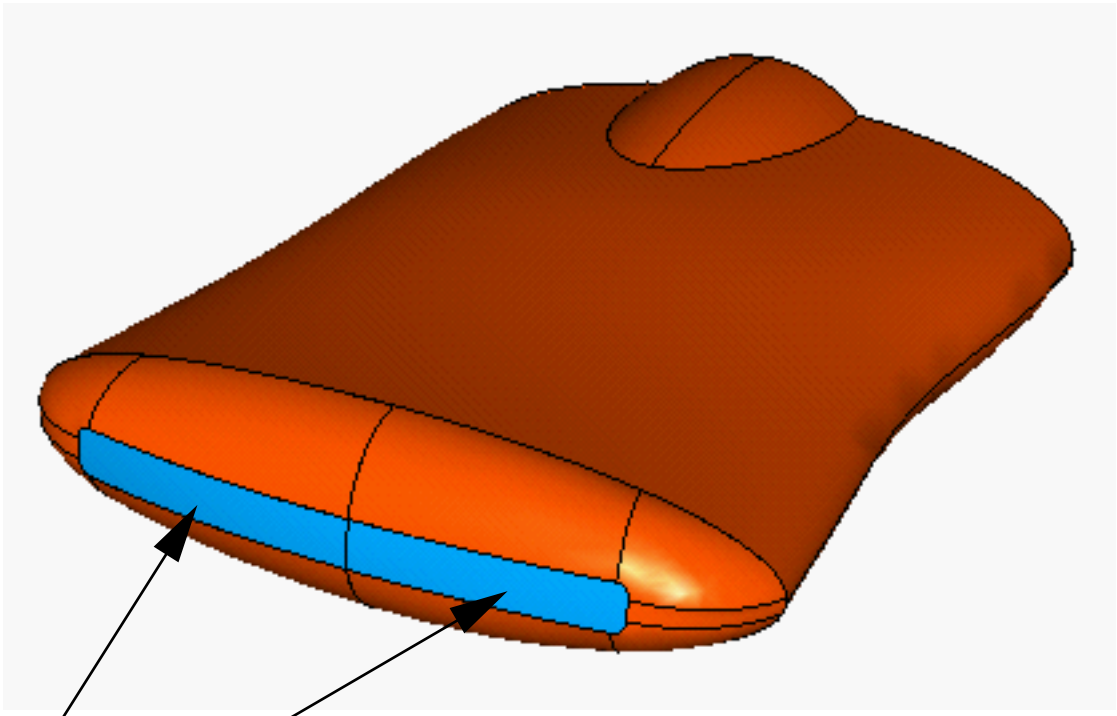


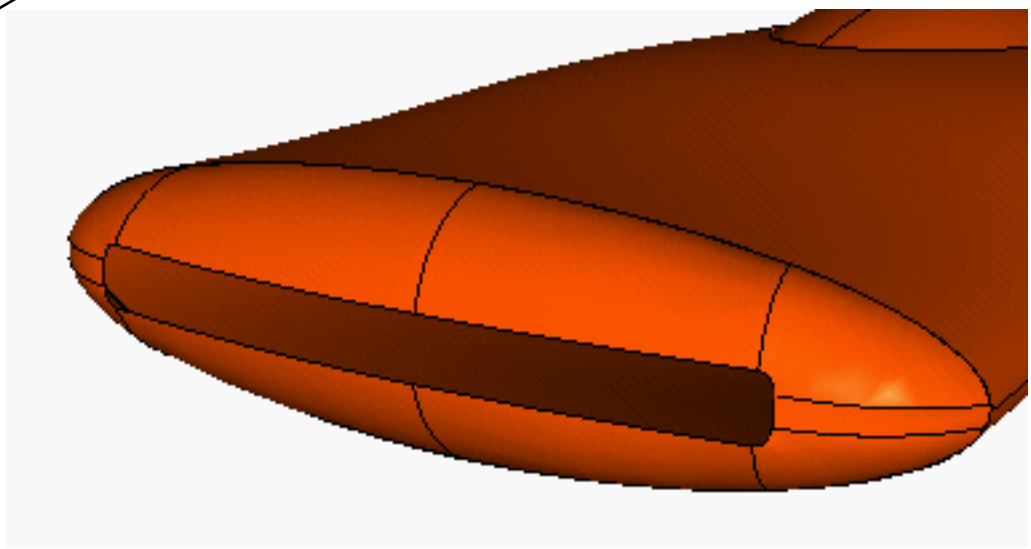




Drag

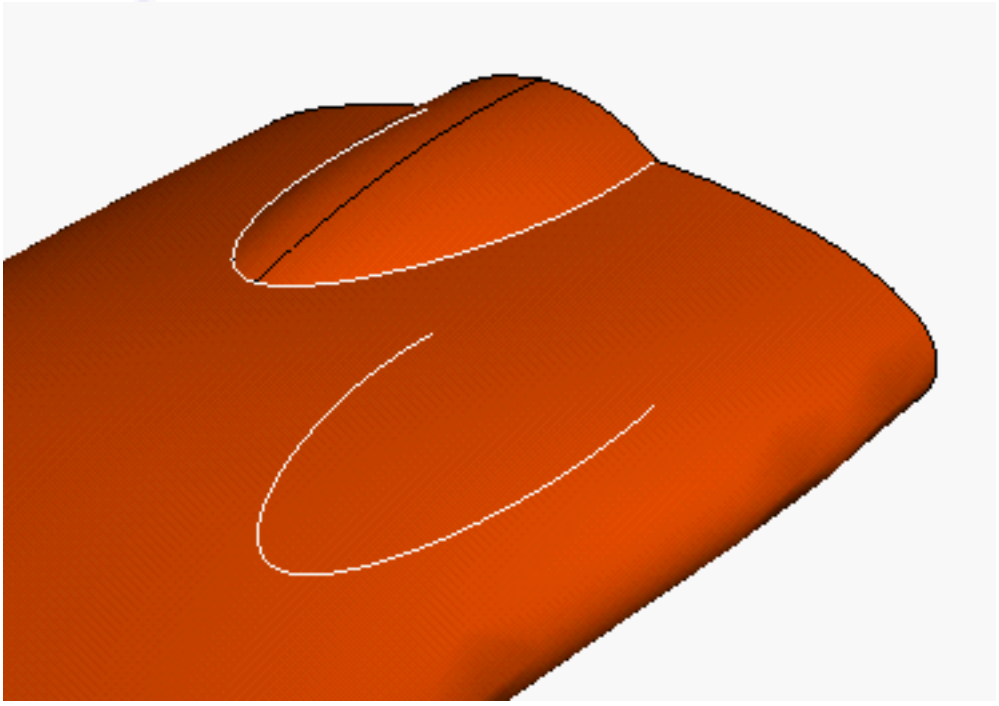
Drag the center point of the two added sections to increase the radius (Flatten the arc)

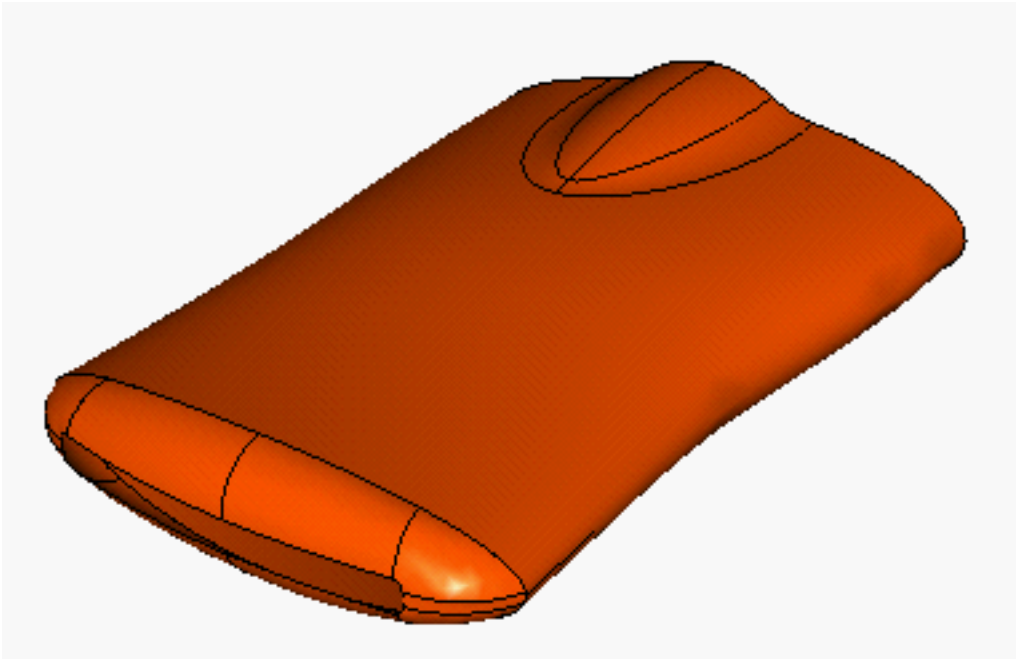




Delete

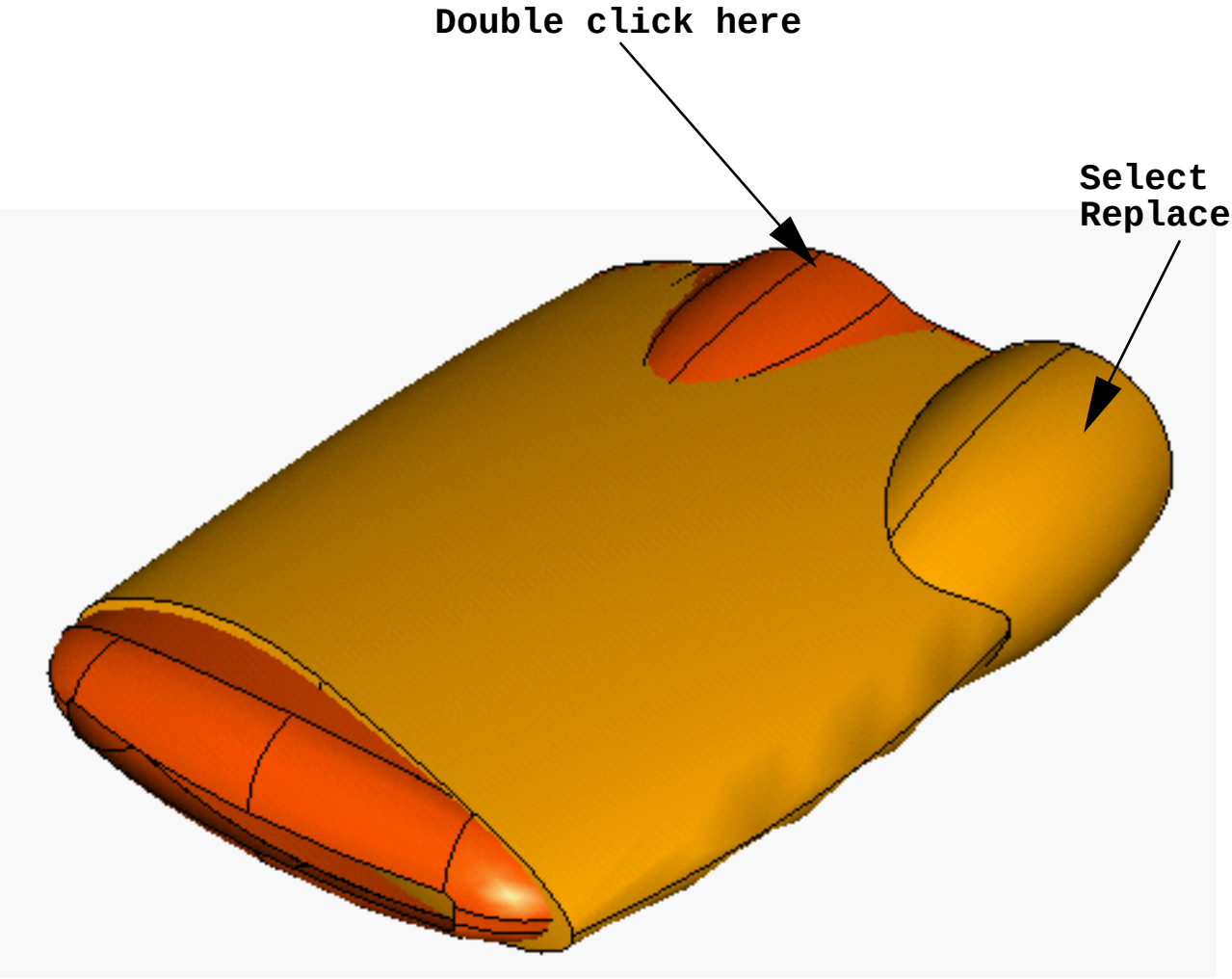
Delete the two surfaces shown





Fillet

Select the two edges, r=30 mm

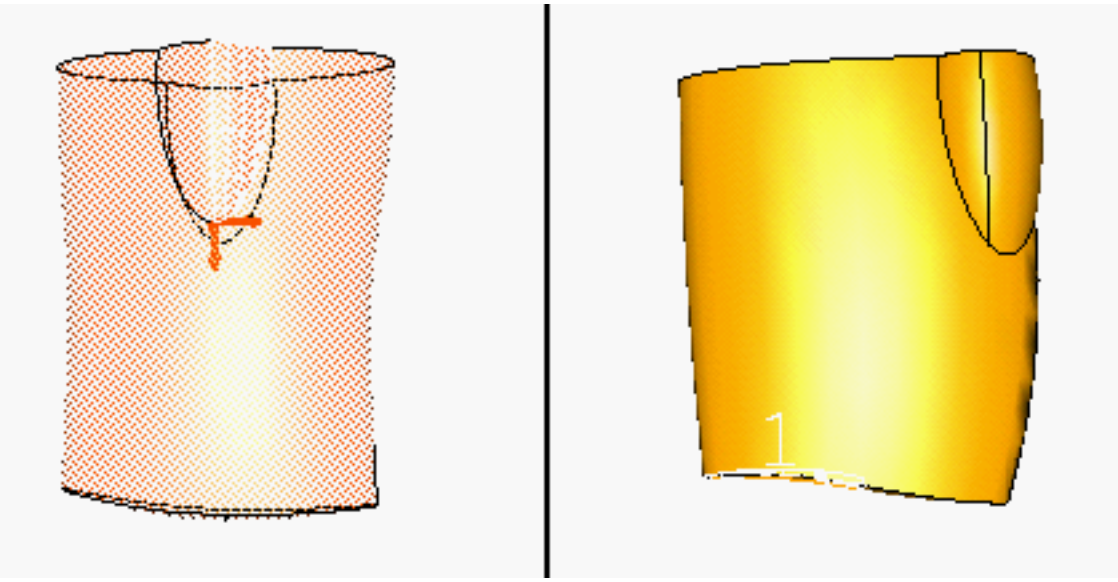


Get

Get the Update part

Modify

Double click the old fan surface, Replace feature, select the newly imported part, ***Yes*** to control mapping.



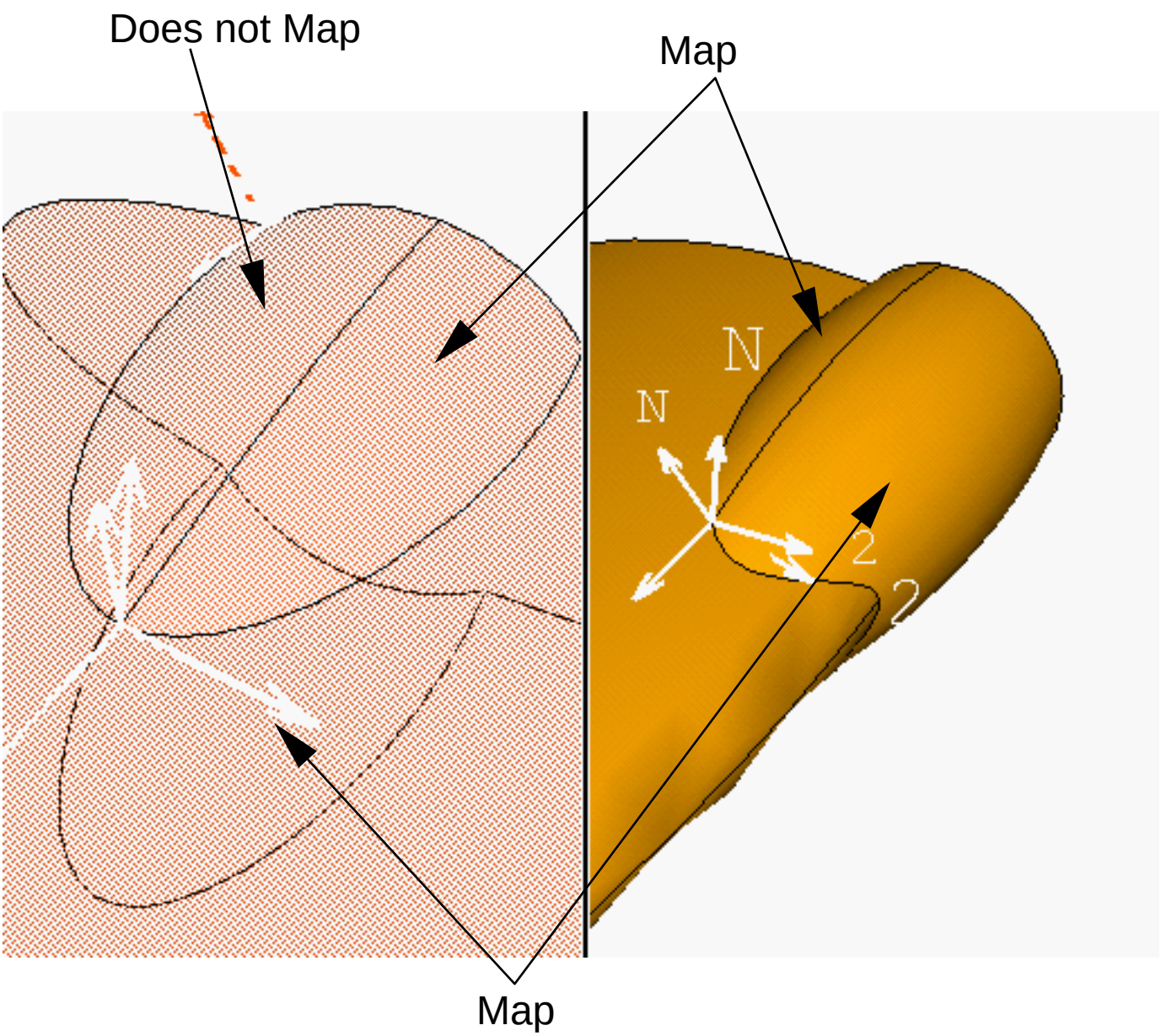
Note changes to geometry:

* Increased curvature to sides
* Shorter body
* Decreased curvature to front cover surface
* Addition of surface cutouts for vent

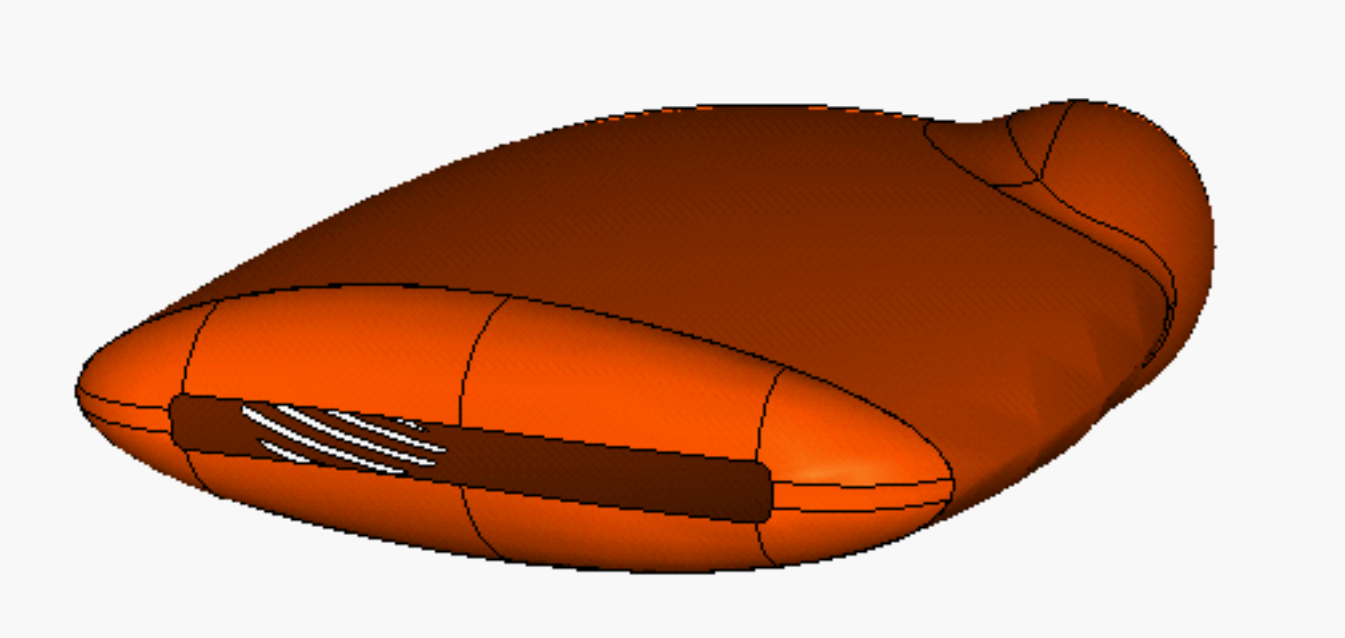
Select surfaces on right side of screen to map to highlighted surfaces on left side.

Note:
After mapping the large body surface, the next fan surface does not need to map. When prompted, select no to map to surface on the right, carriage return. You should then proceed to map the last surface (rear) to the the highlighted surface on the right.

See next page for details.....



Update



At Replay Interrupt.

Modify

Remove Unfound, yes

Update

Many times surfaces change,edges no longer exist. Master Series allows user interaction if necessary to get the correct design intent.

In this case, we know we have a topology change to the fillet edges, so we will continue the replay.