



# Modeling the invisible

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# Class summary

In this class, Uwe Rossbacher, industry specialist for technical surfacing/styling at Autodesk, explains the unique principles of Class A automotive modeling. Specifically, he addresses the importance of modeling beyond the theoretical edges of a model, a key skill for top technical surfacing specialists in the automotive industry.

Code MA3478-P

12/4/13 (Wednesday) 2:30 PM









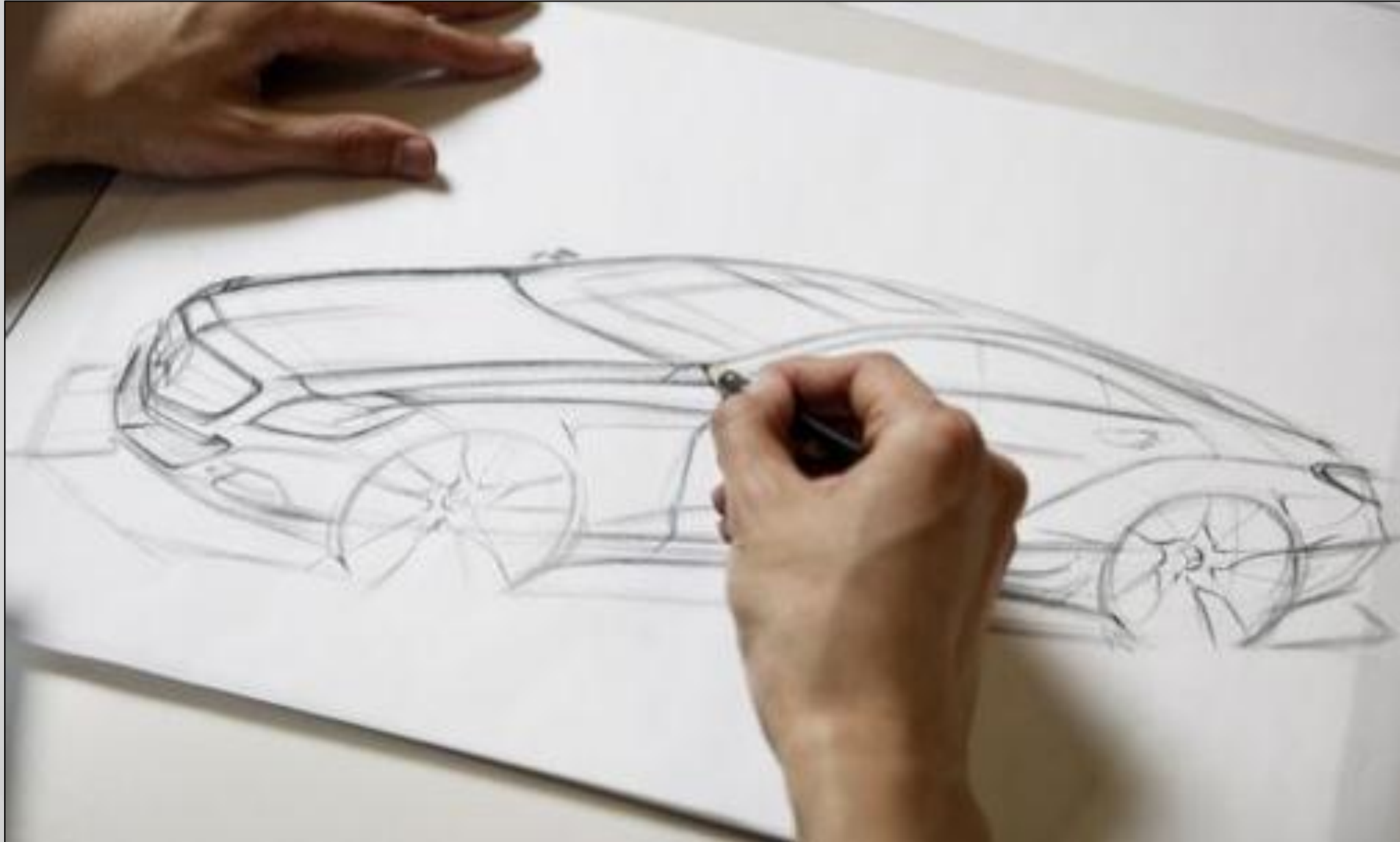


# just another tool ...



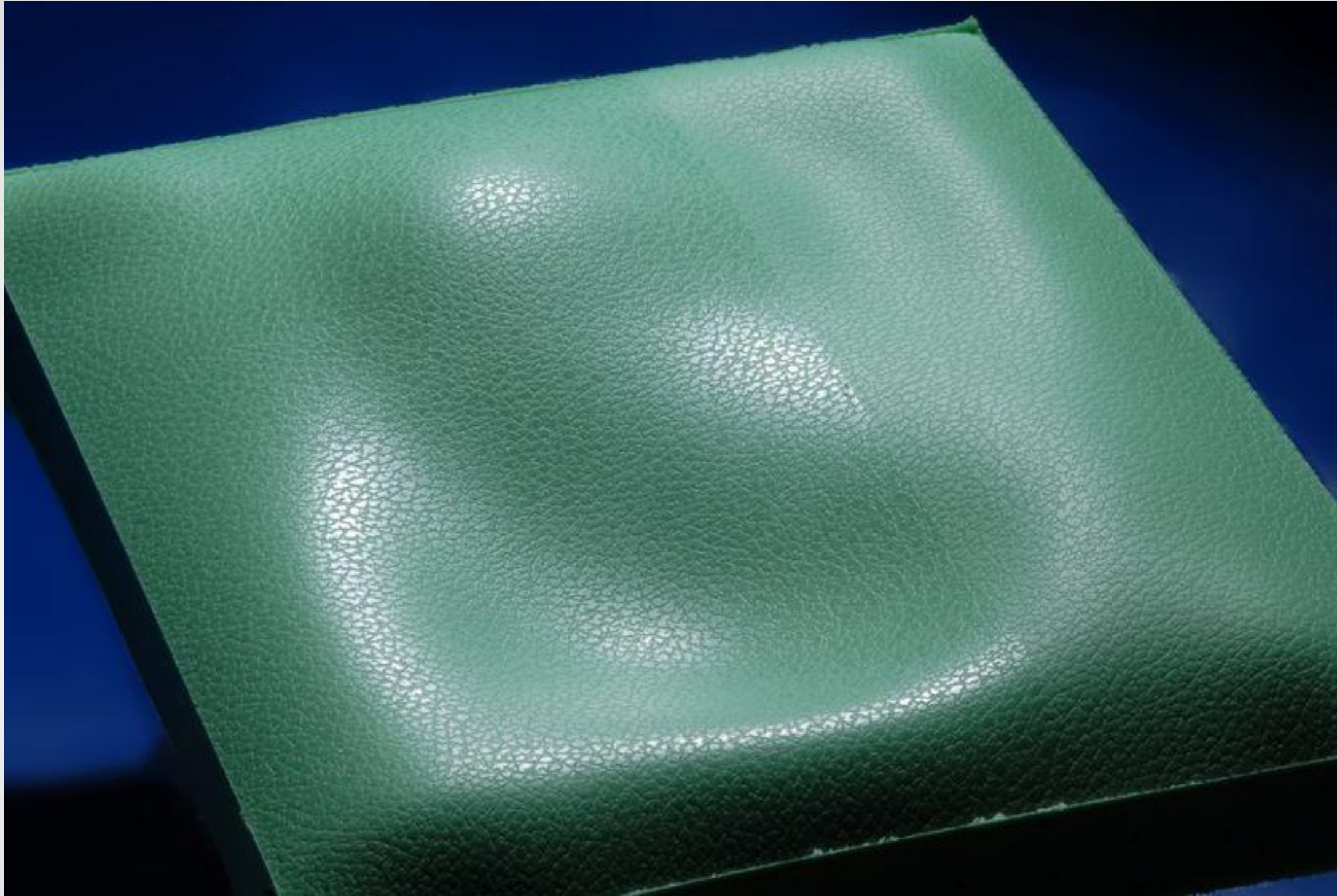






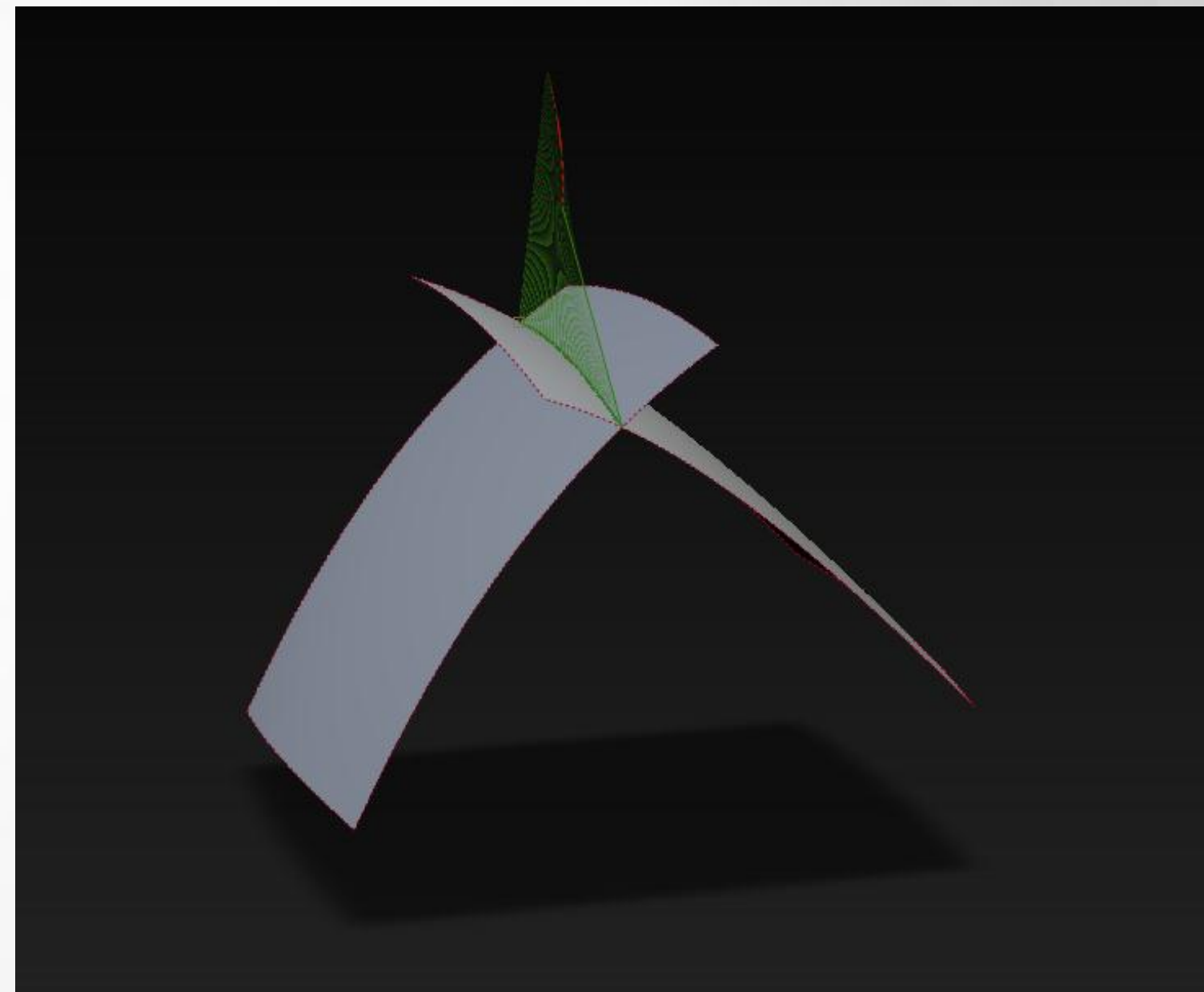








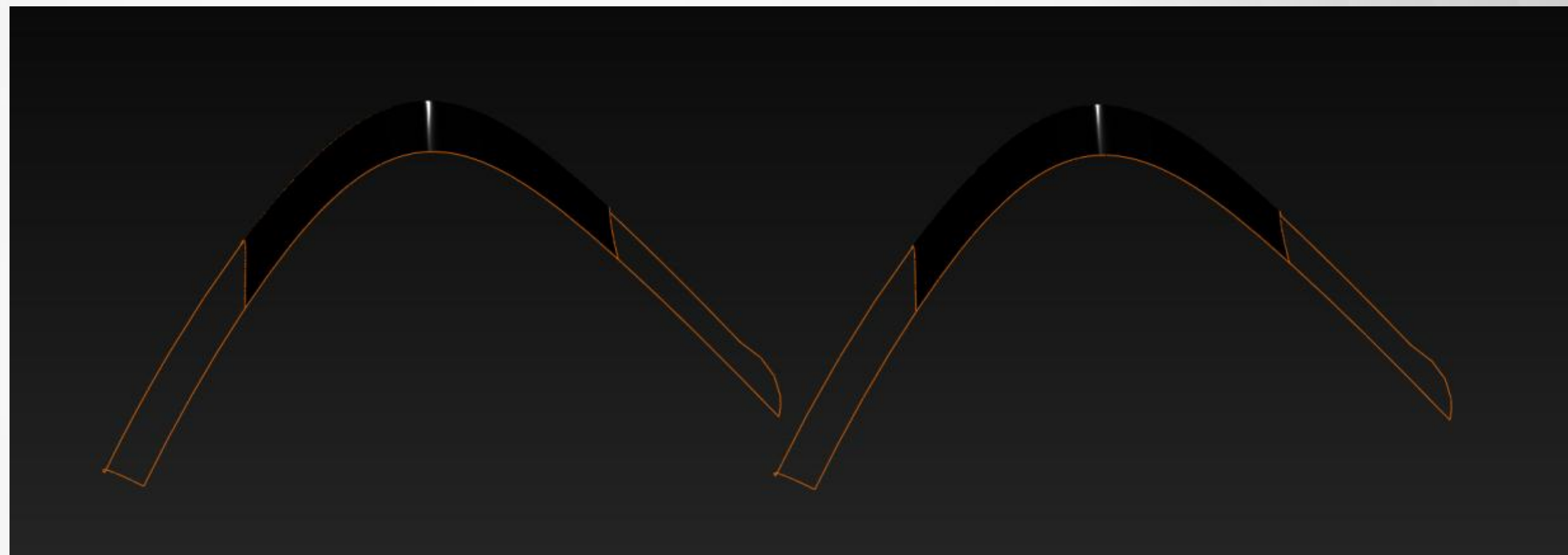
Show two freeform surfaces  
Intersect them  
Analyse the intersection

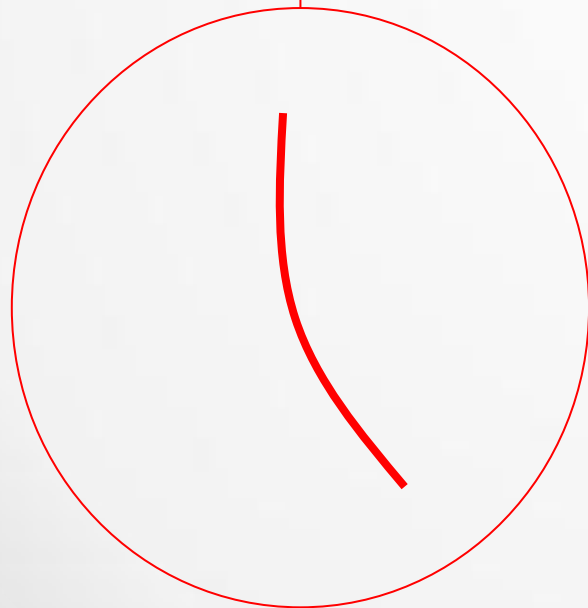
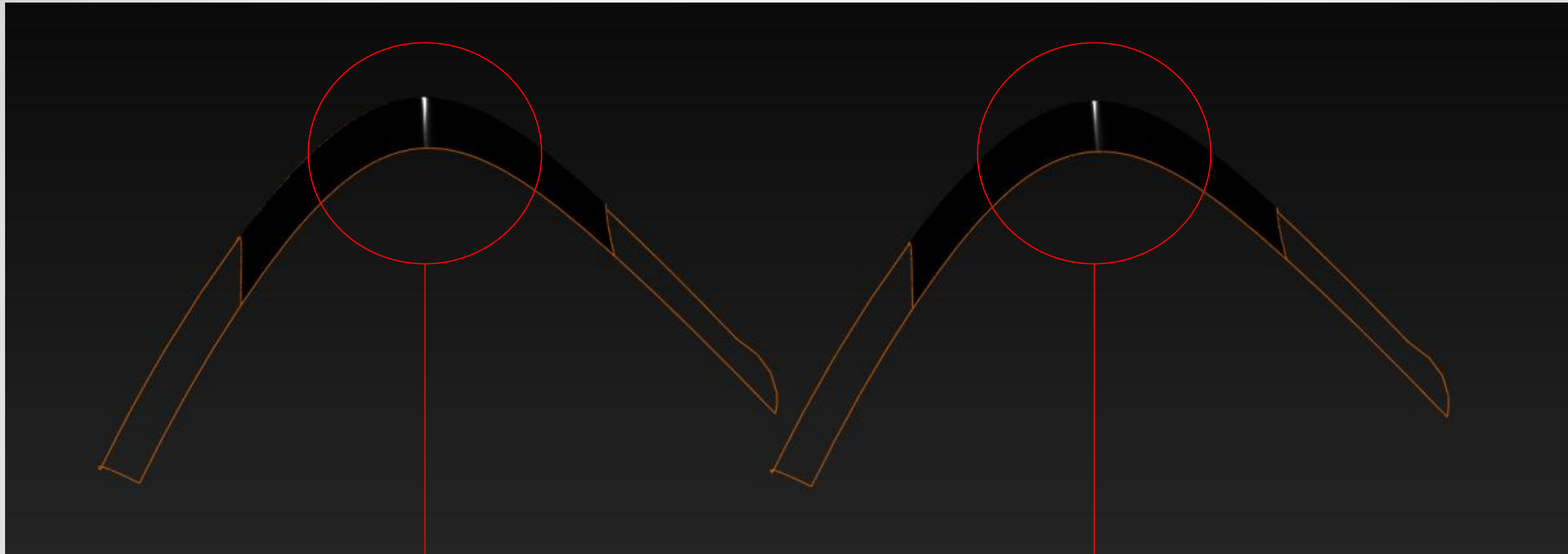


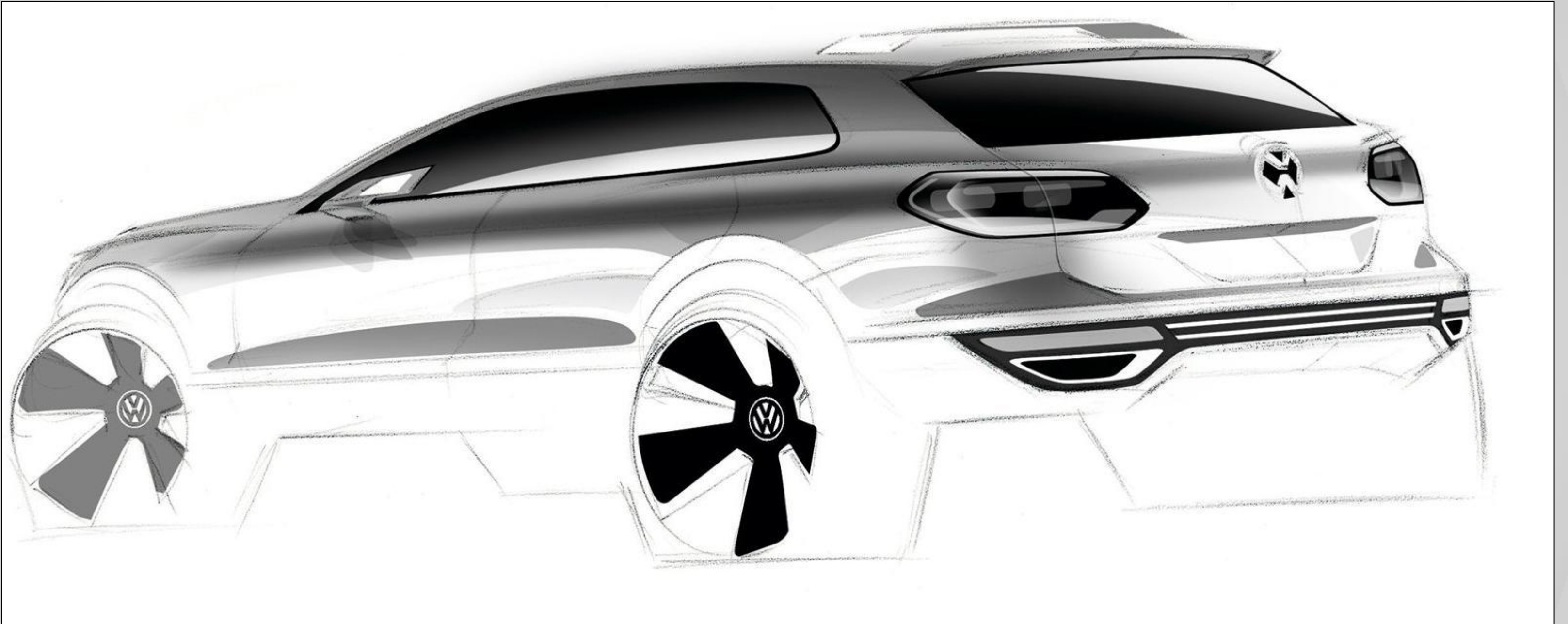




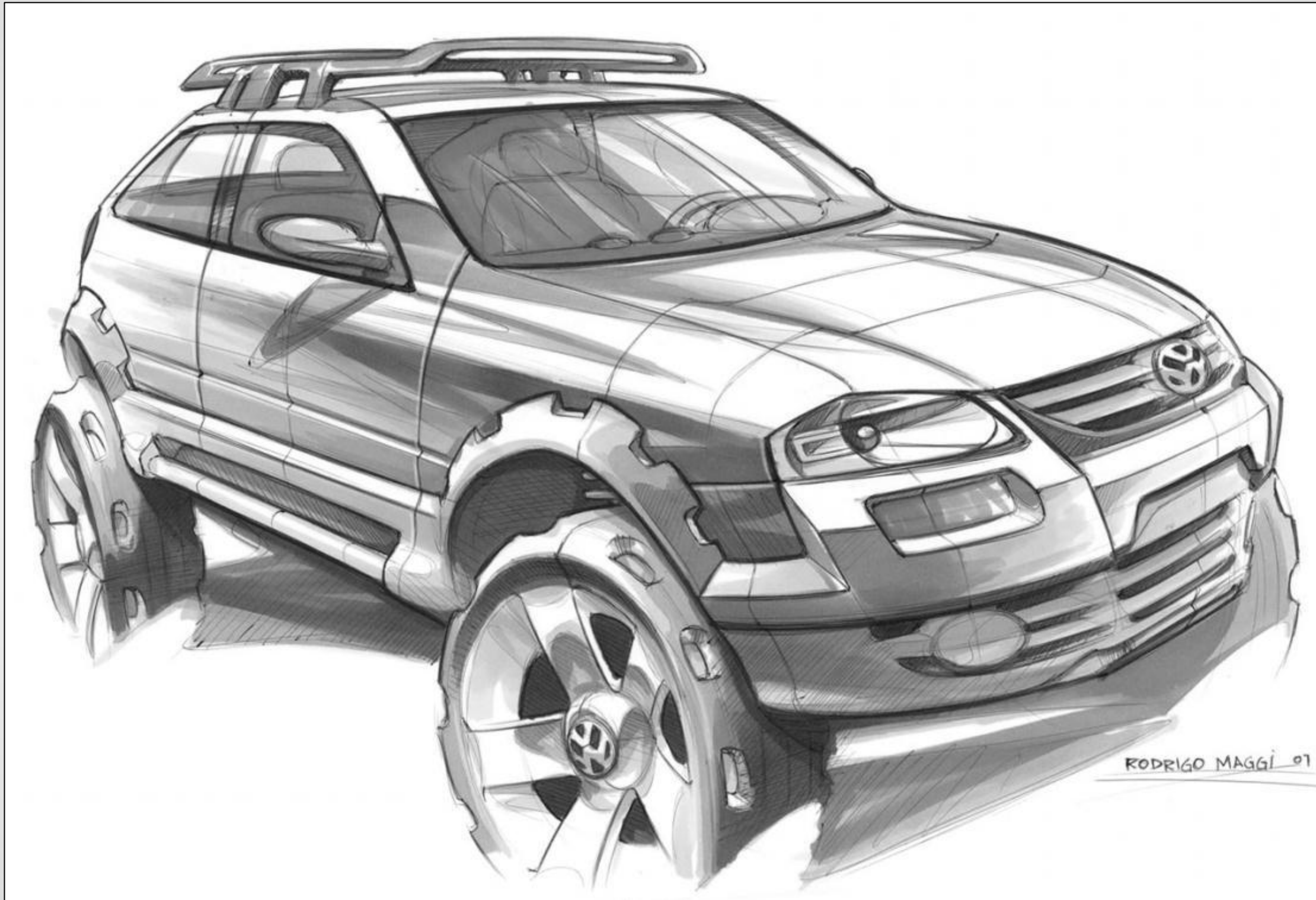
Why is it bad?  
Make a fillet!









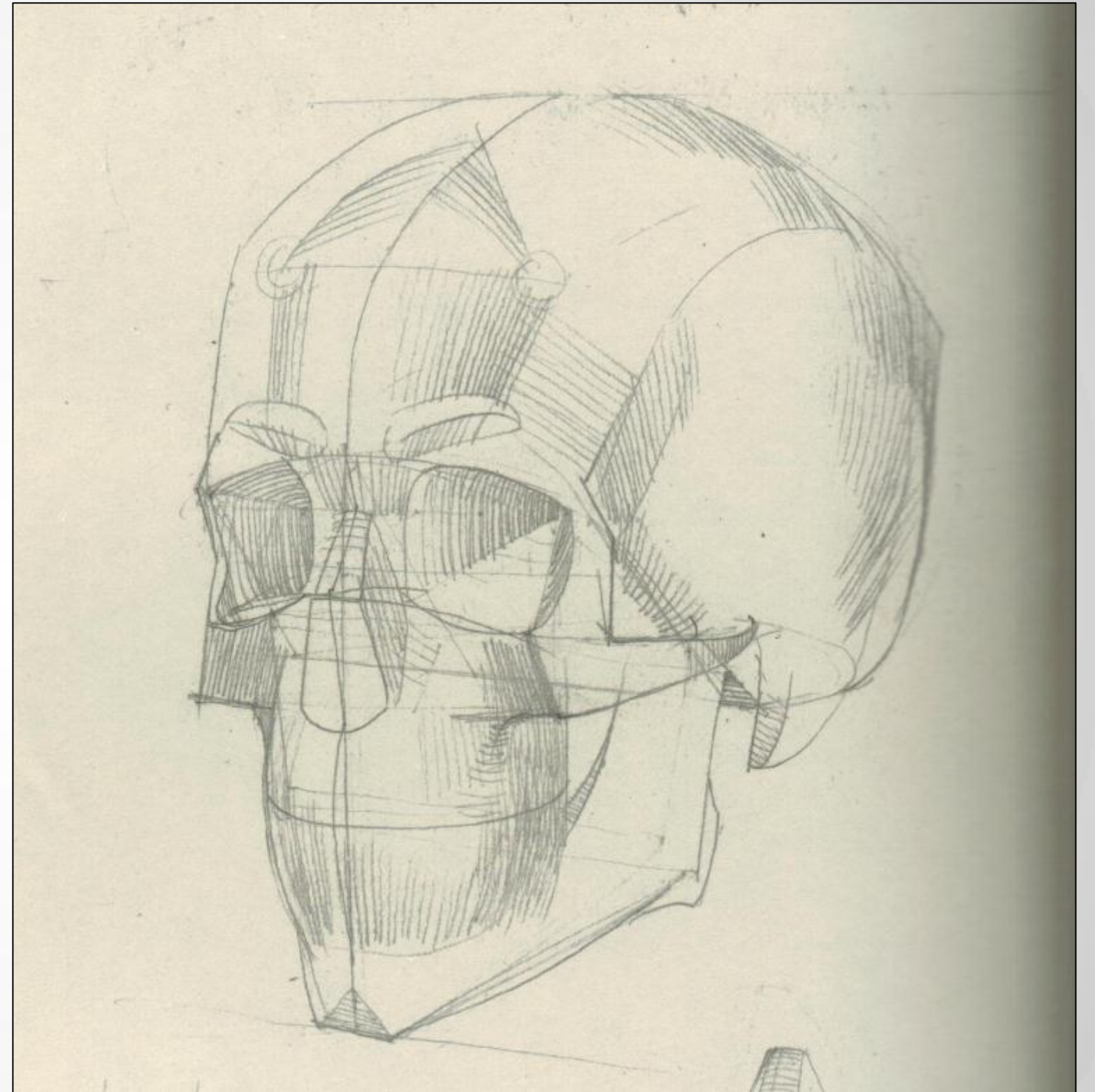
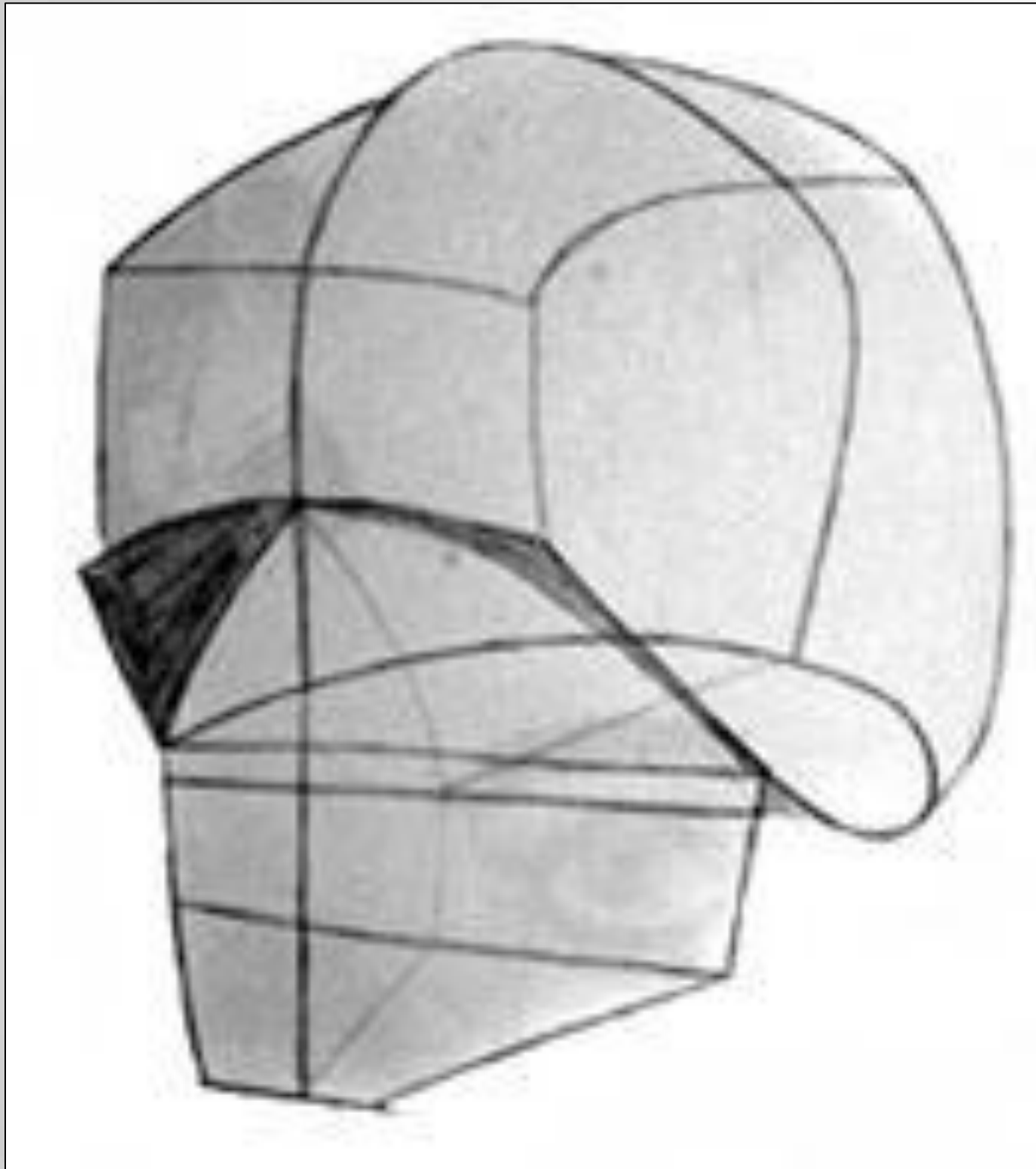




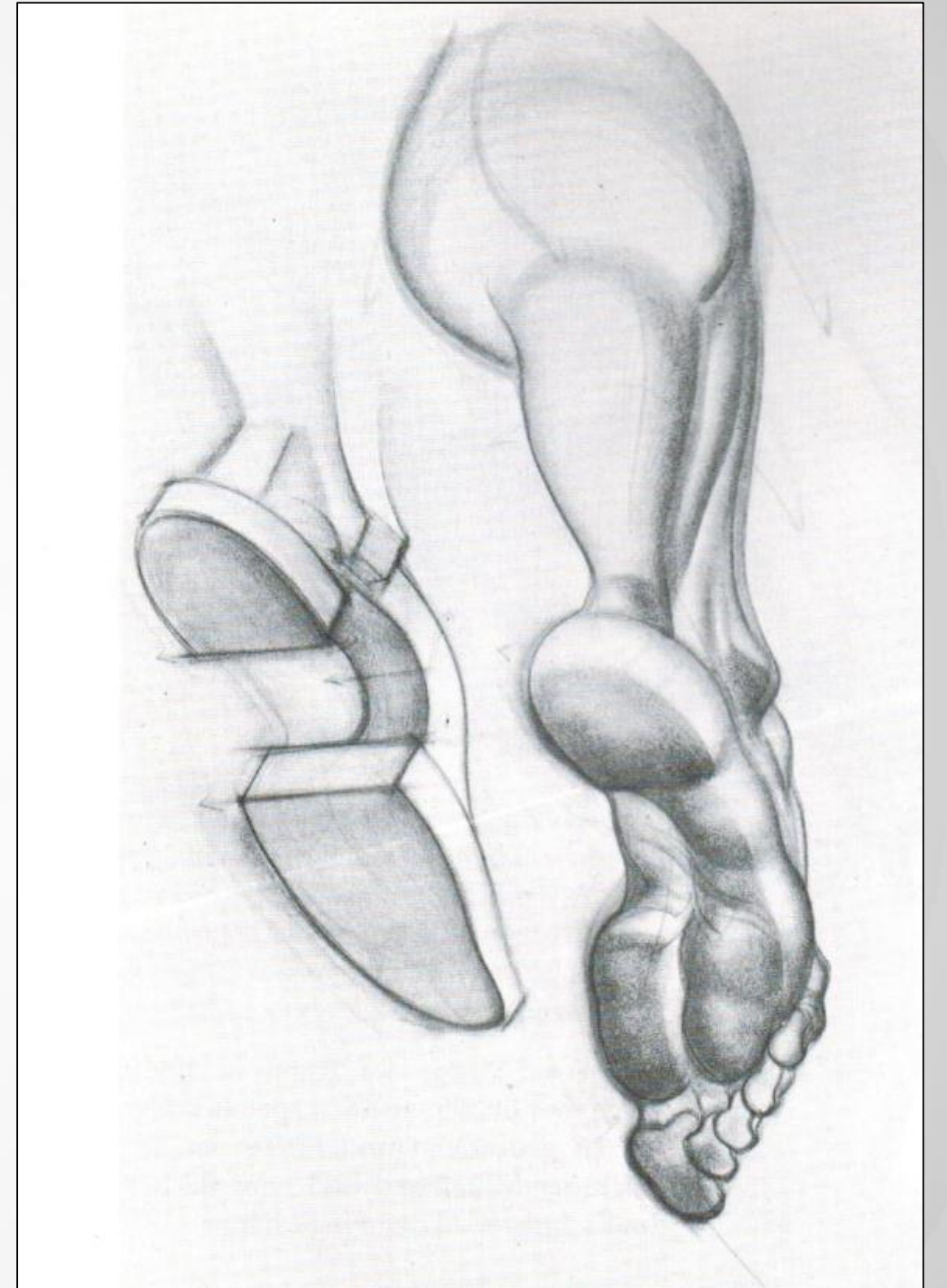
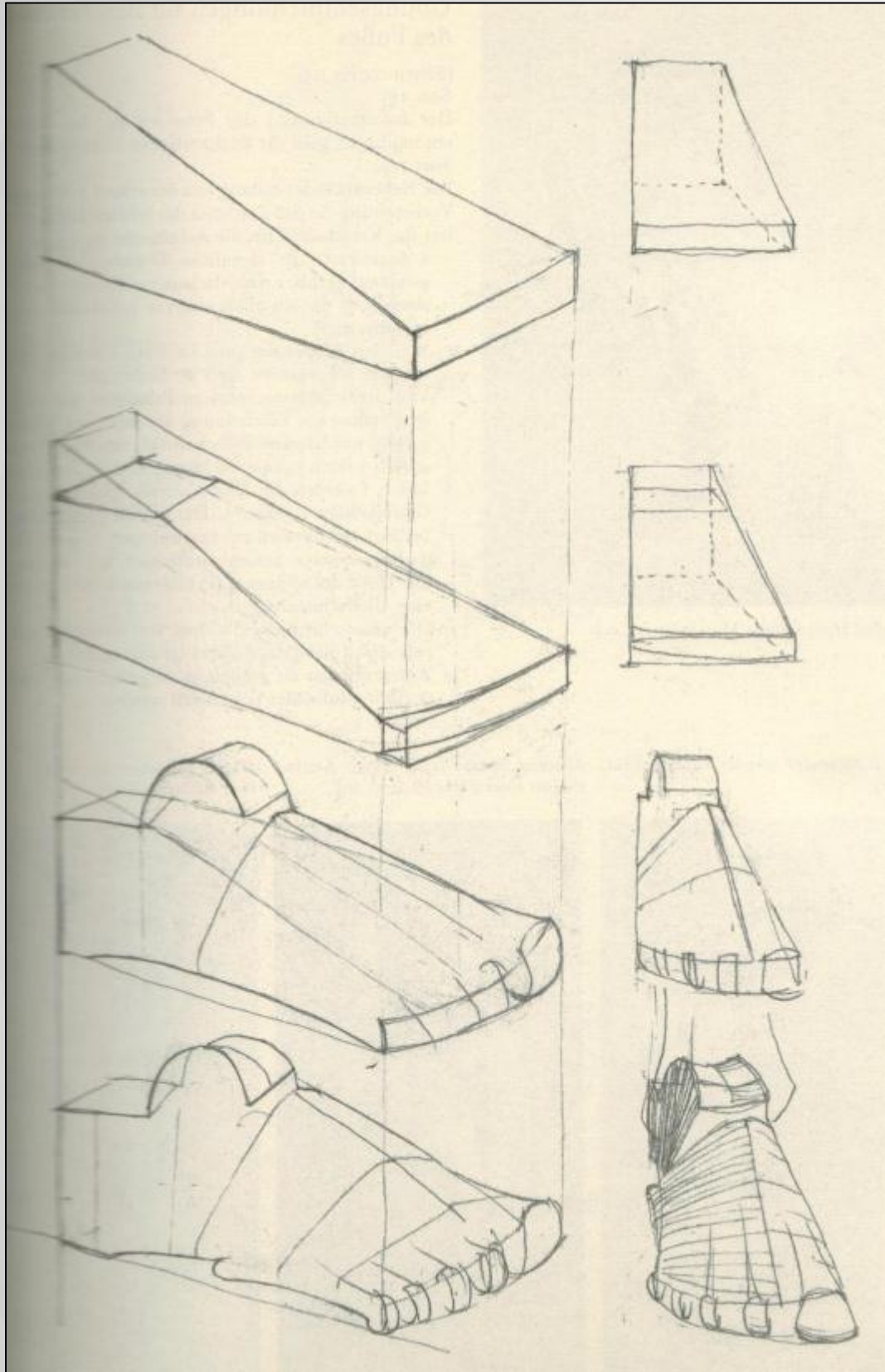






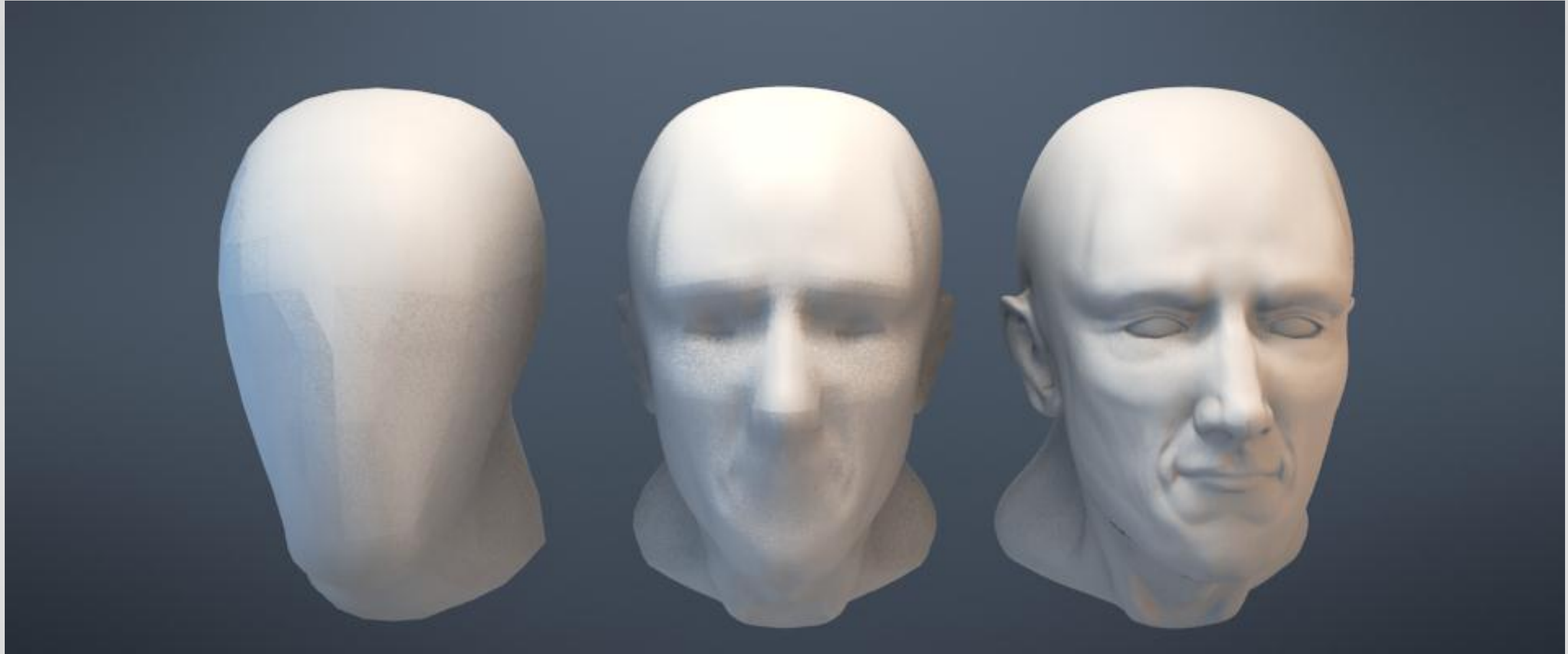




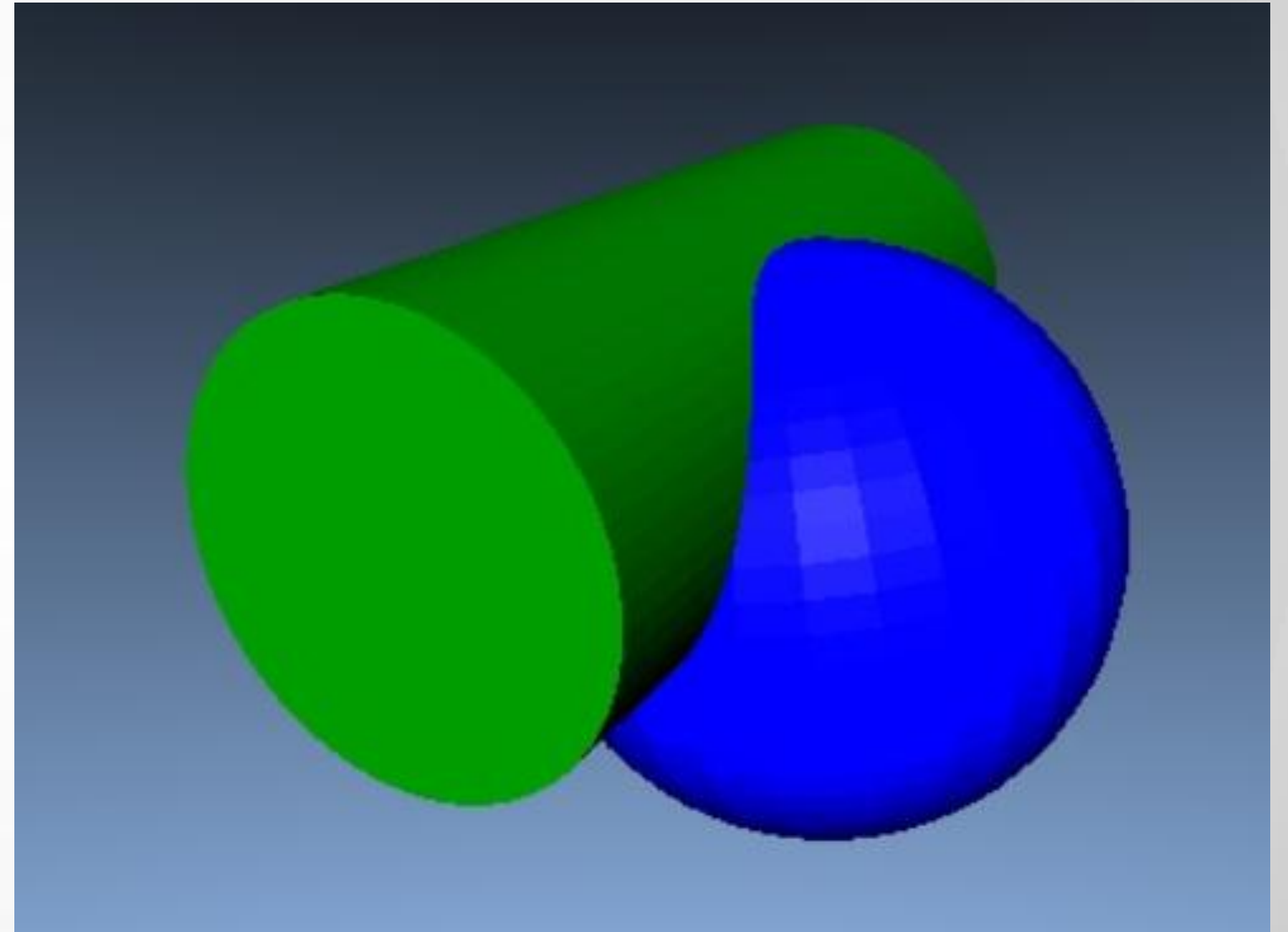
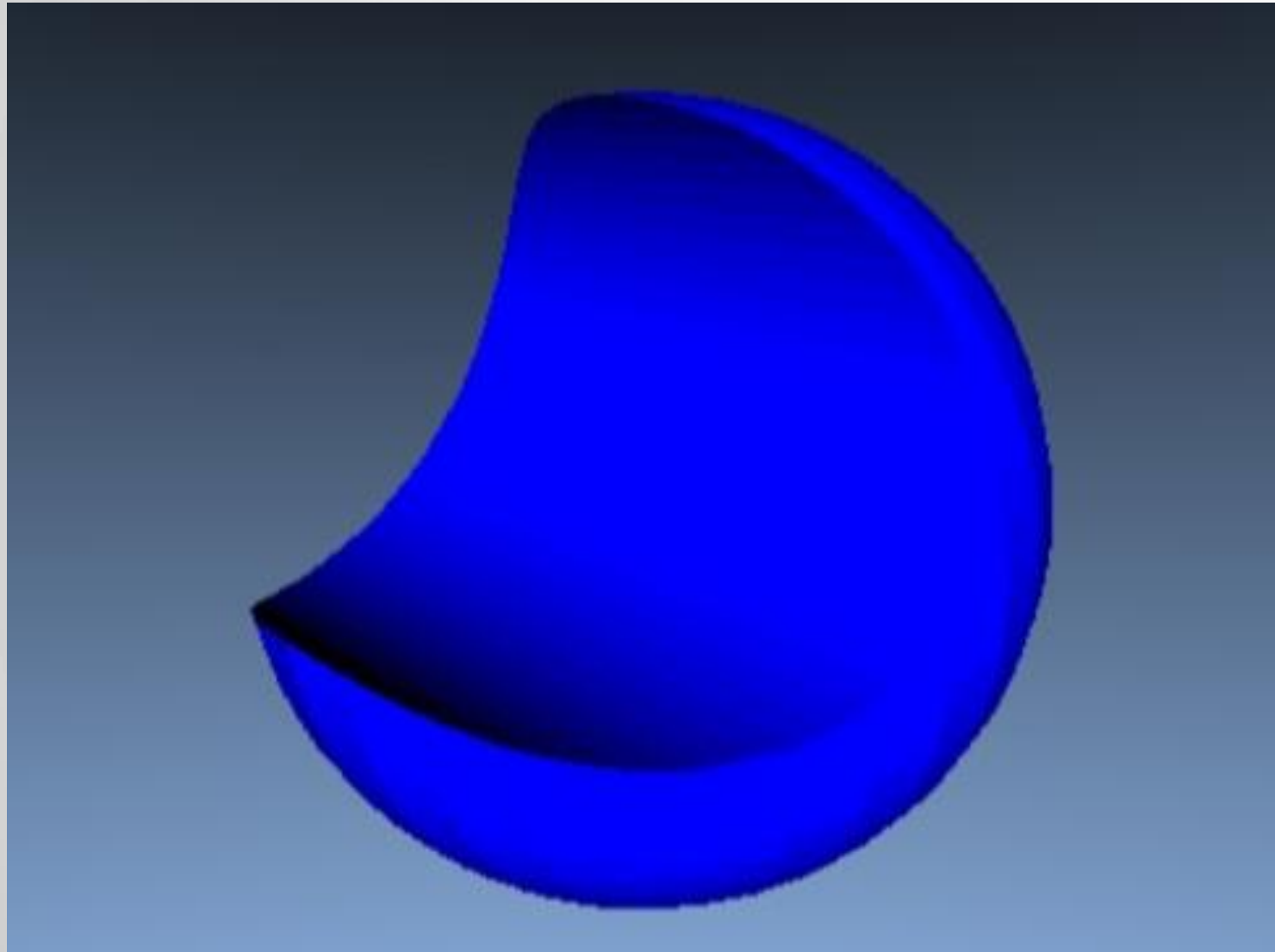








# Lines appear as intersection of surfaces!

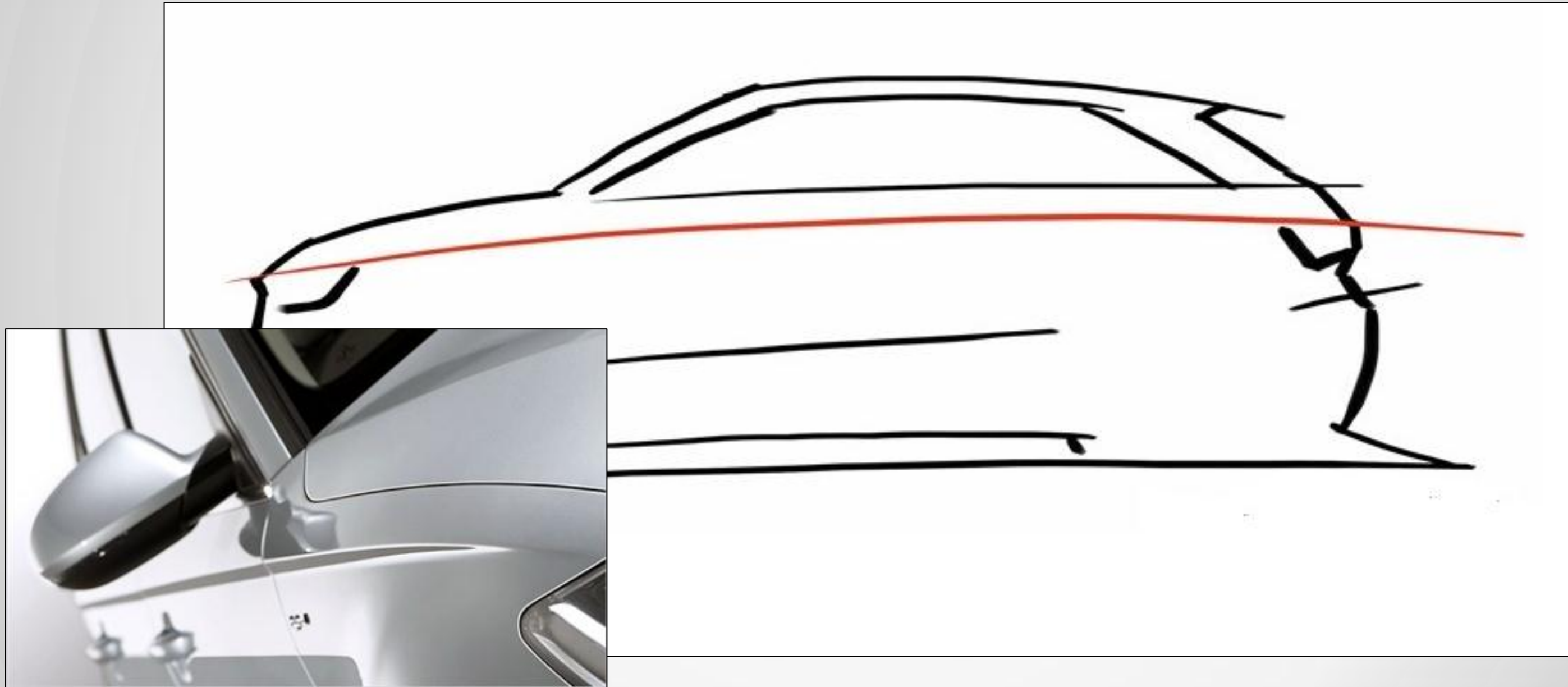


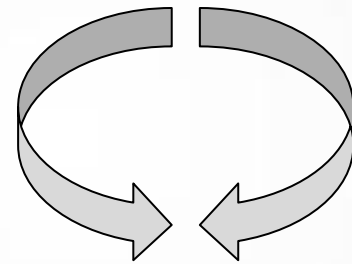
# tightness of lines



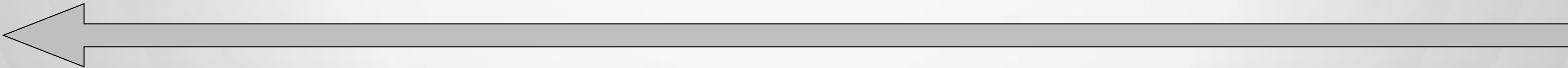
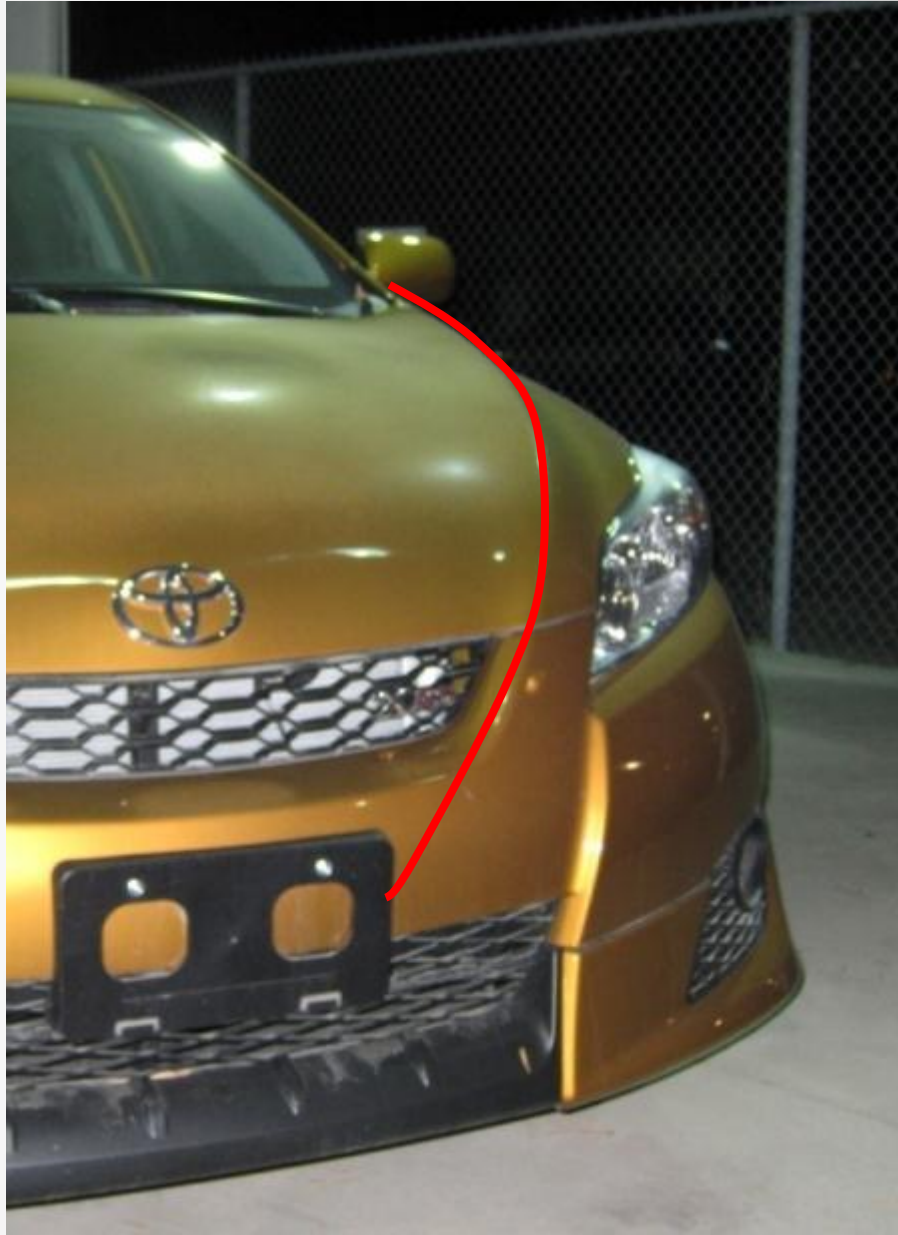
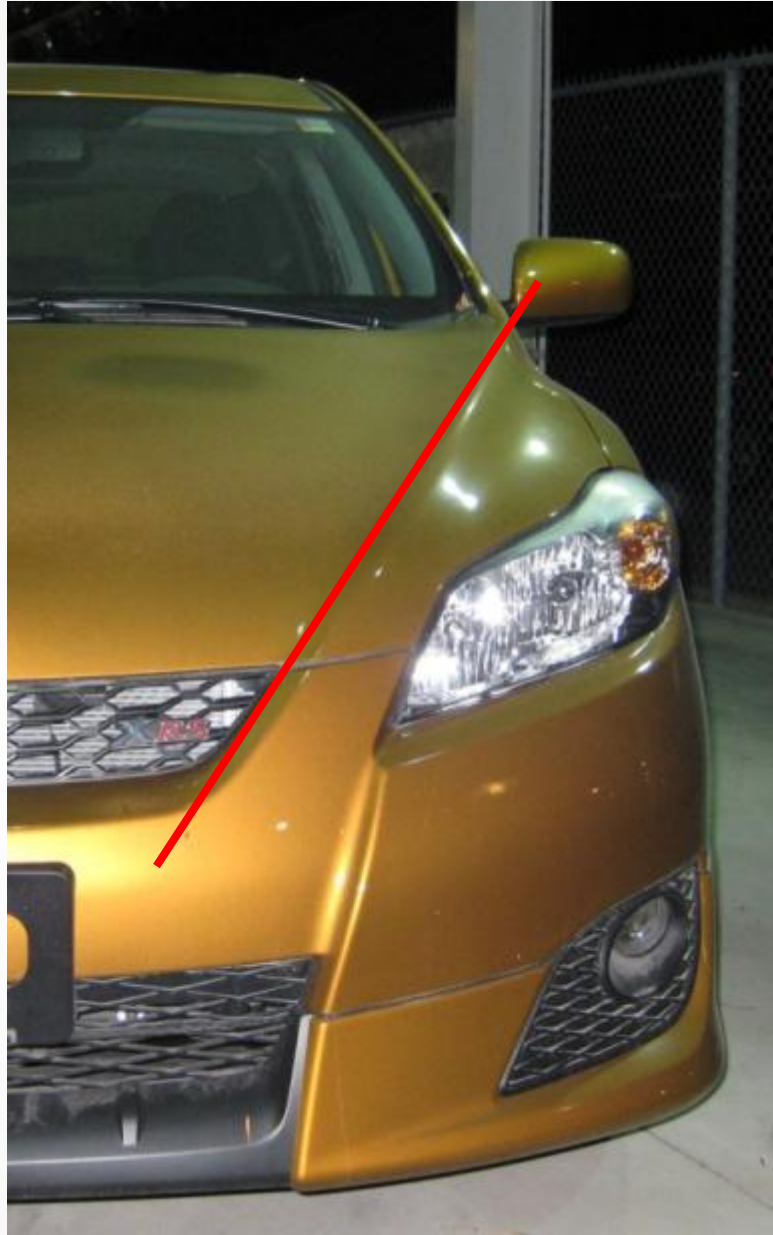


# Tornado Line







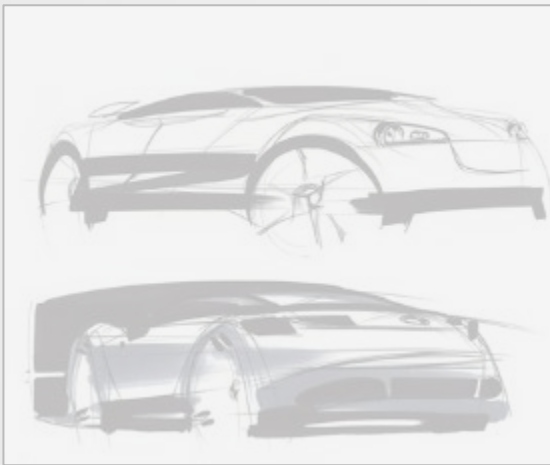






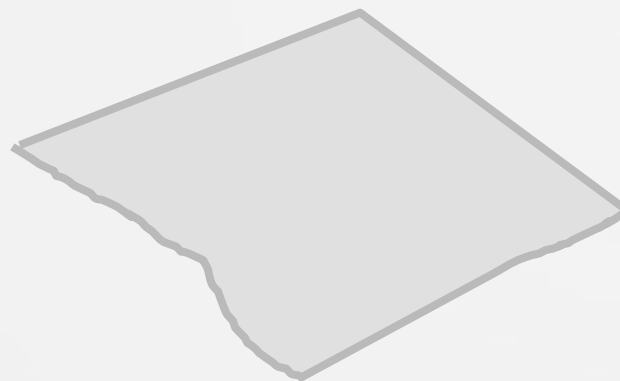
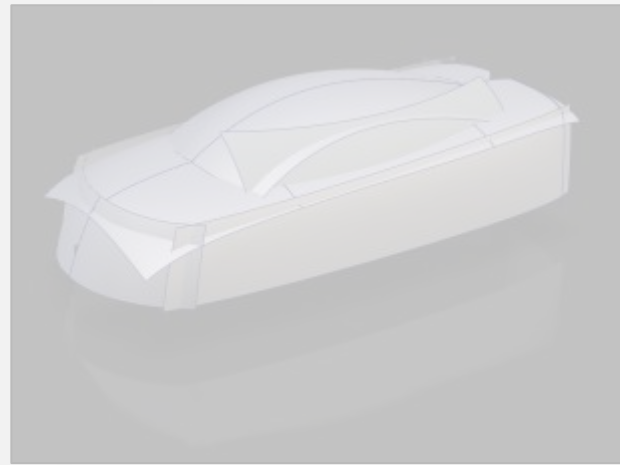
1

Idea based on  
lines



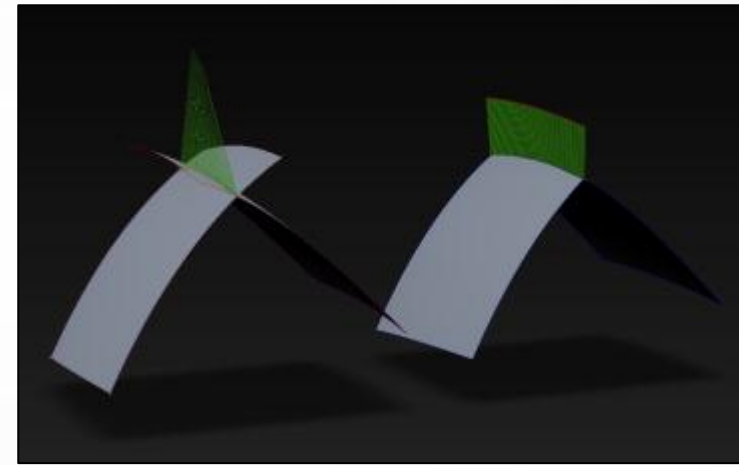
2

First 3d model  
with lines  
appearing as  
intersections



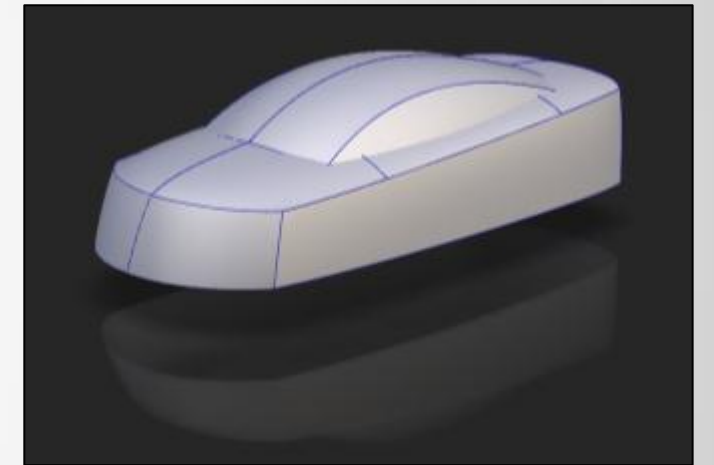
3

smoothing the  
lines



4

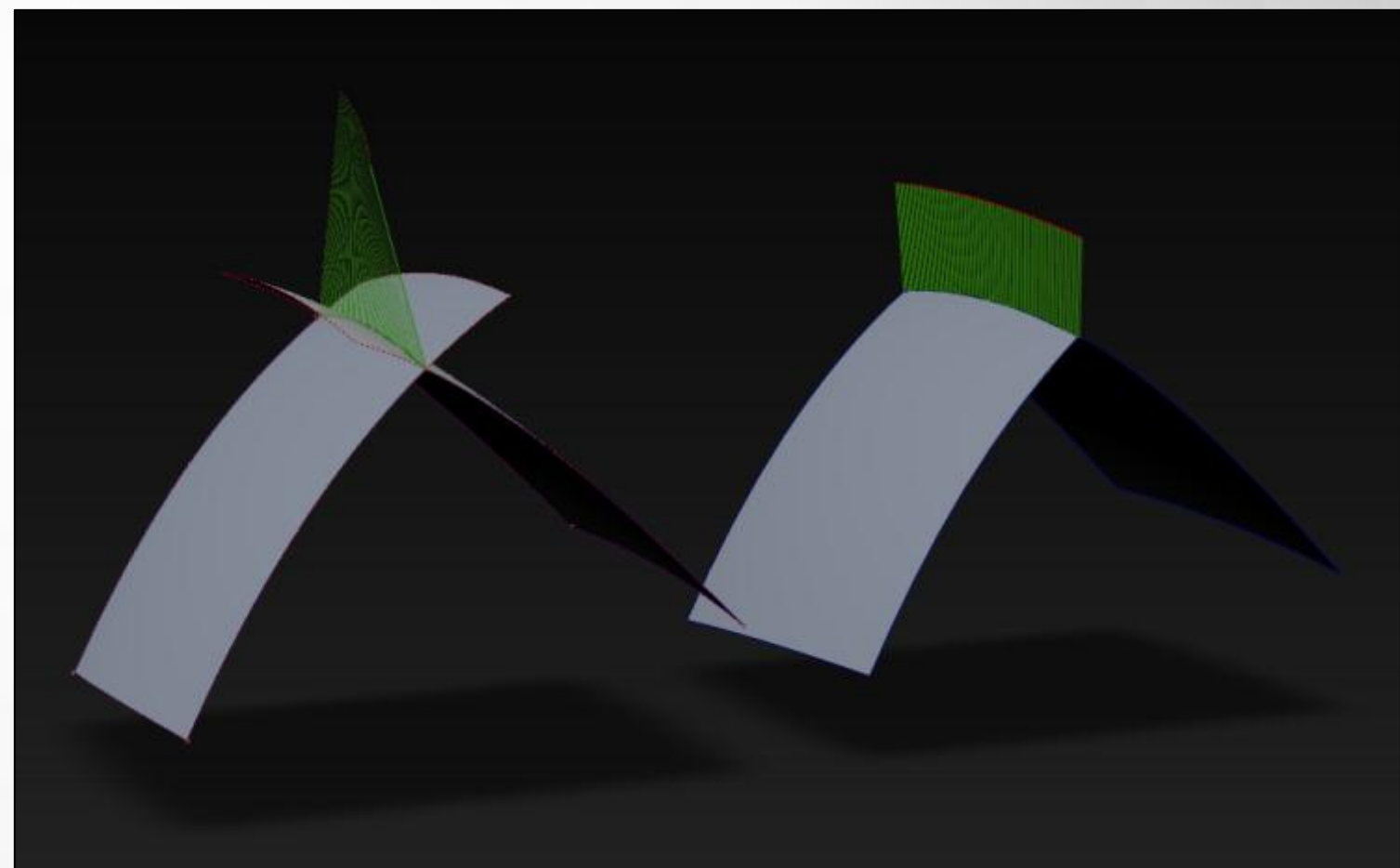
Surfaces  
recalculated after  
the modified  
lines





Smooth the intersection  
Recalculate the freeform surfaces

Show again a fillet!





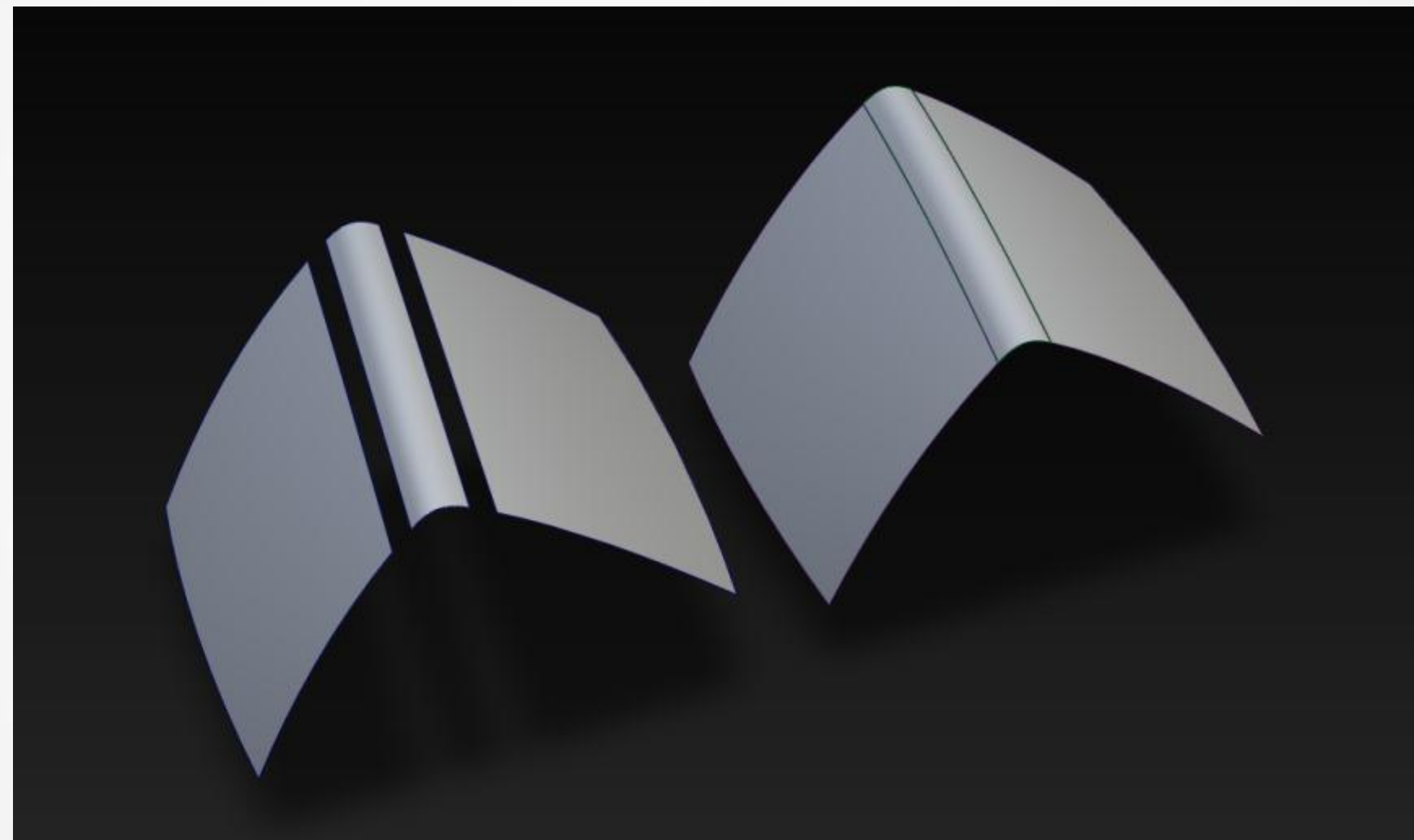
# **Model the invisible edge!**

## **Theoretical Modeling**



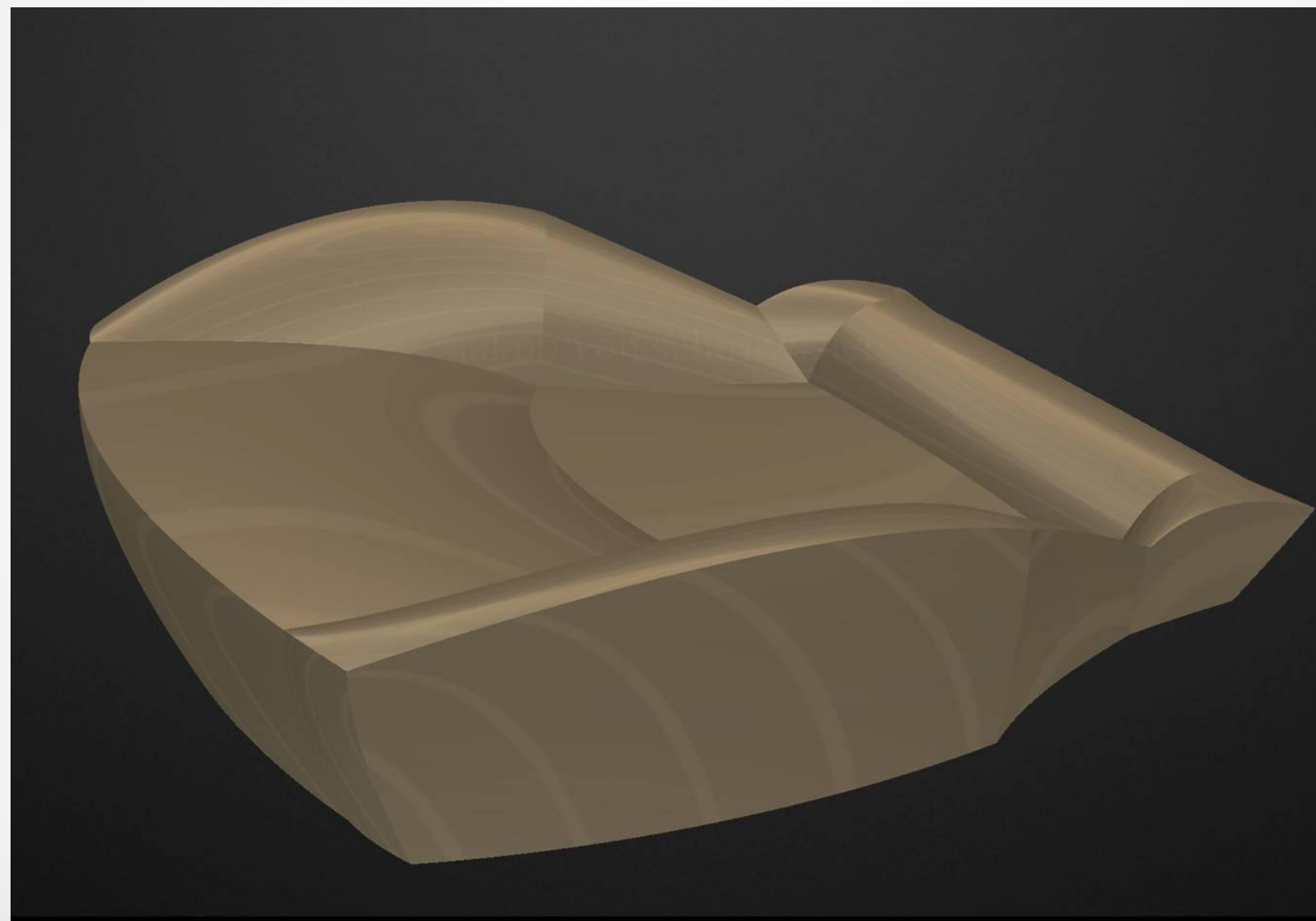
# 1. Radius that is too short

Try to do a smaller fillet!

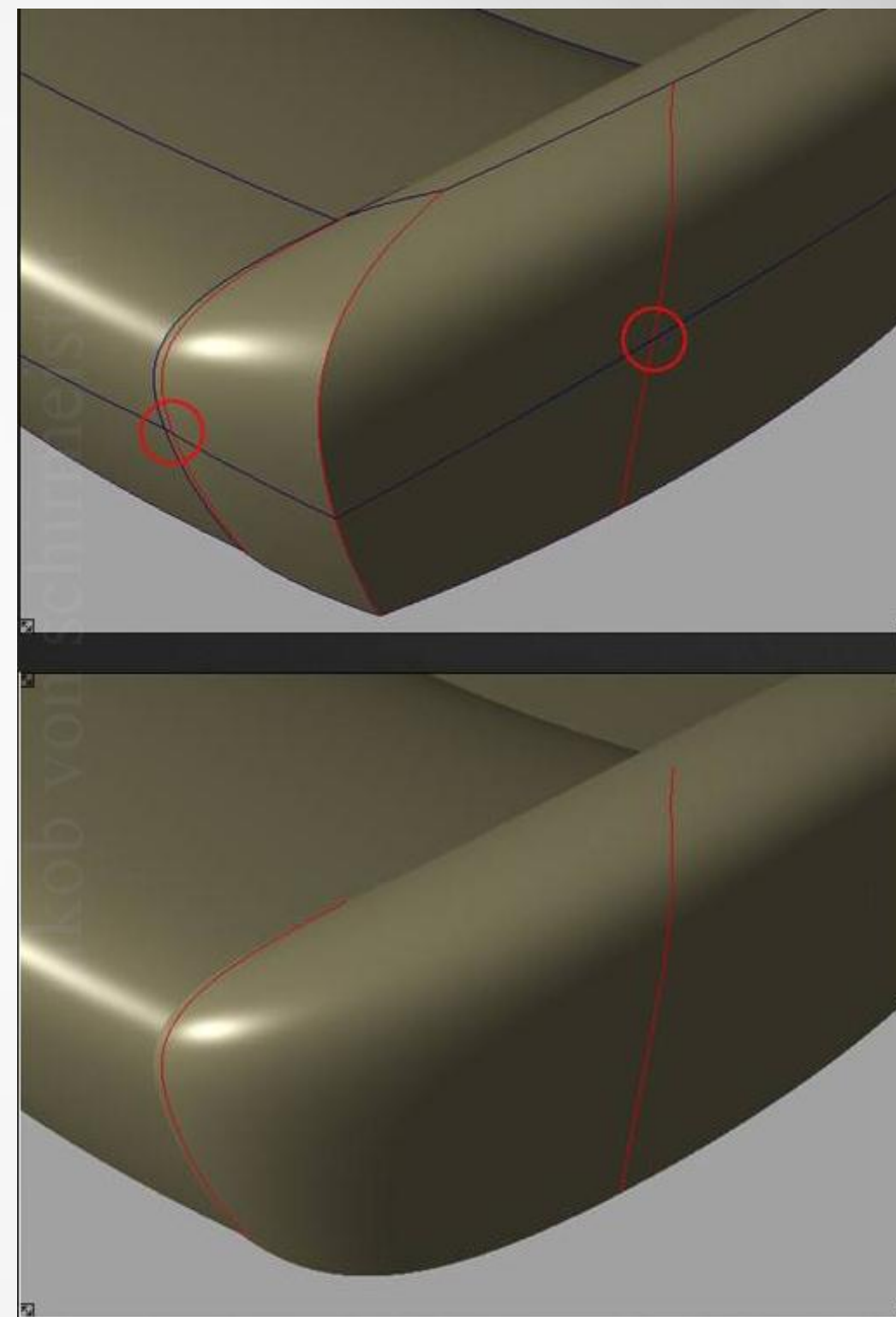
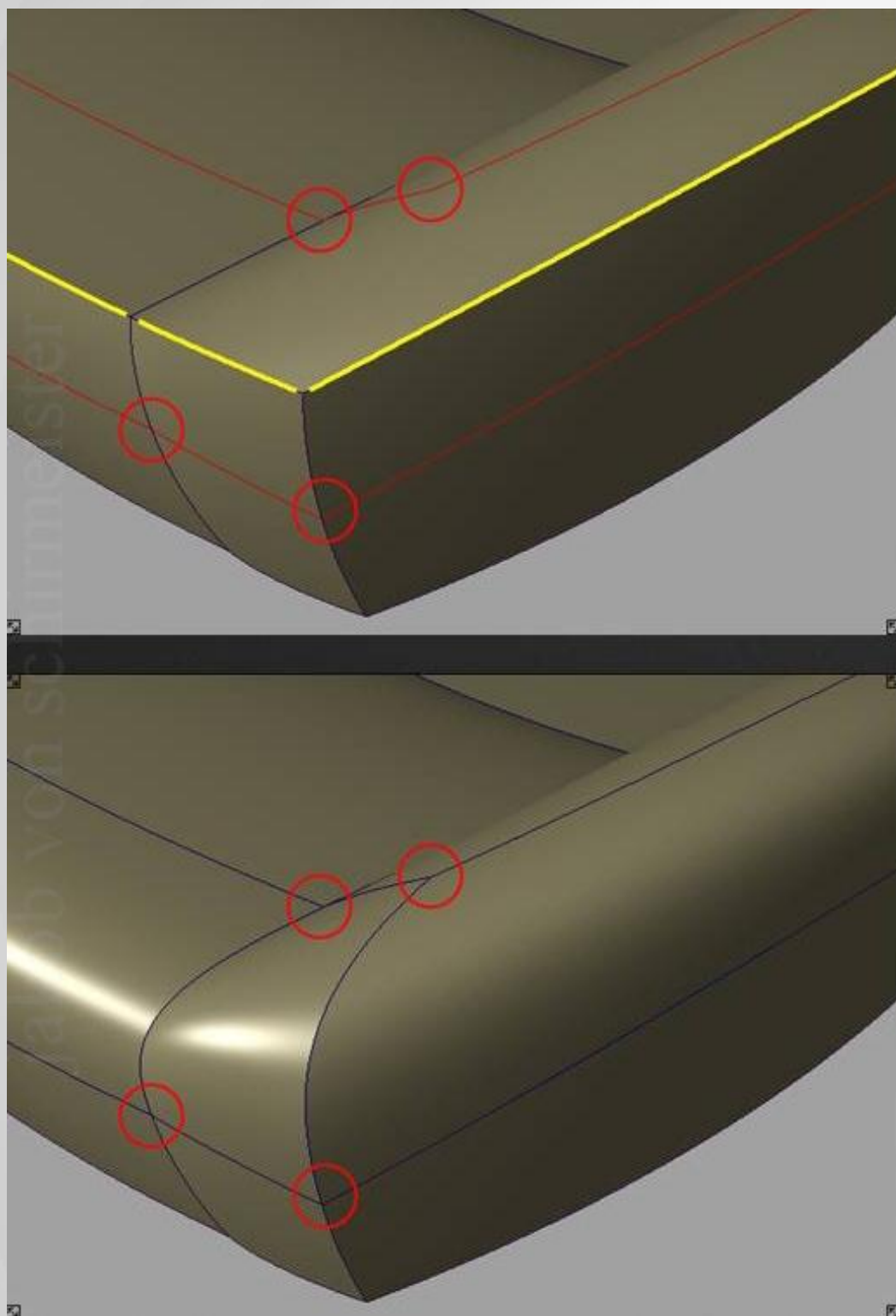




## 2. closing of corners



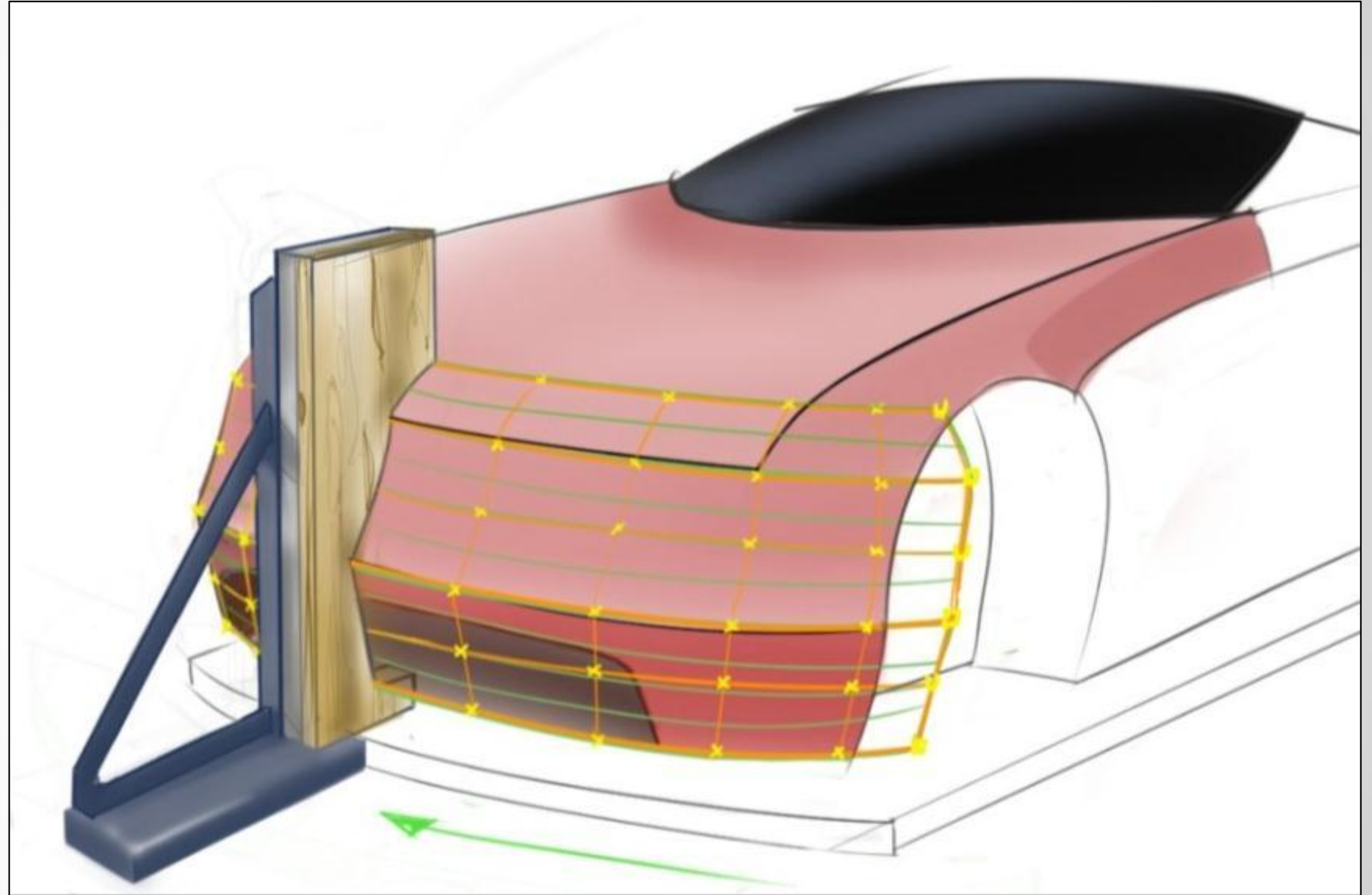
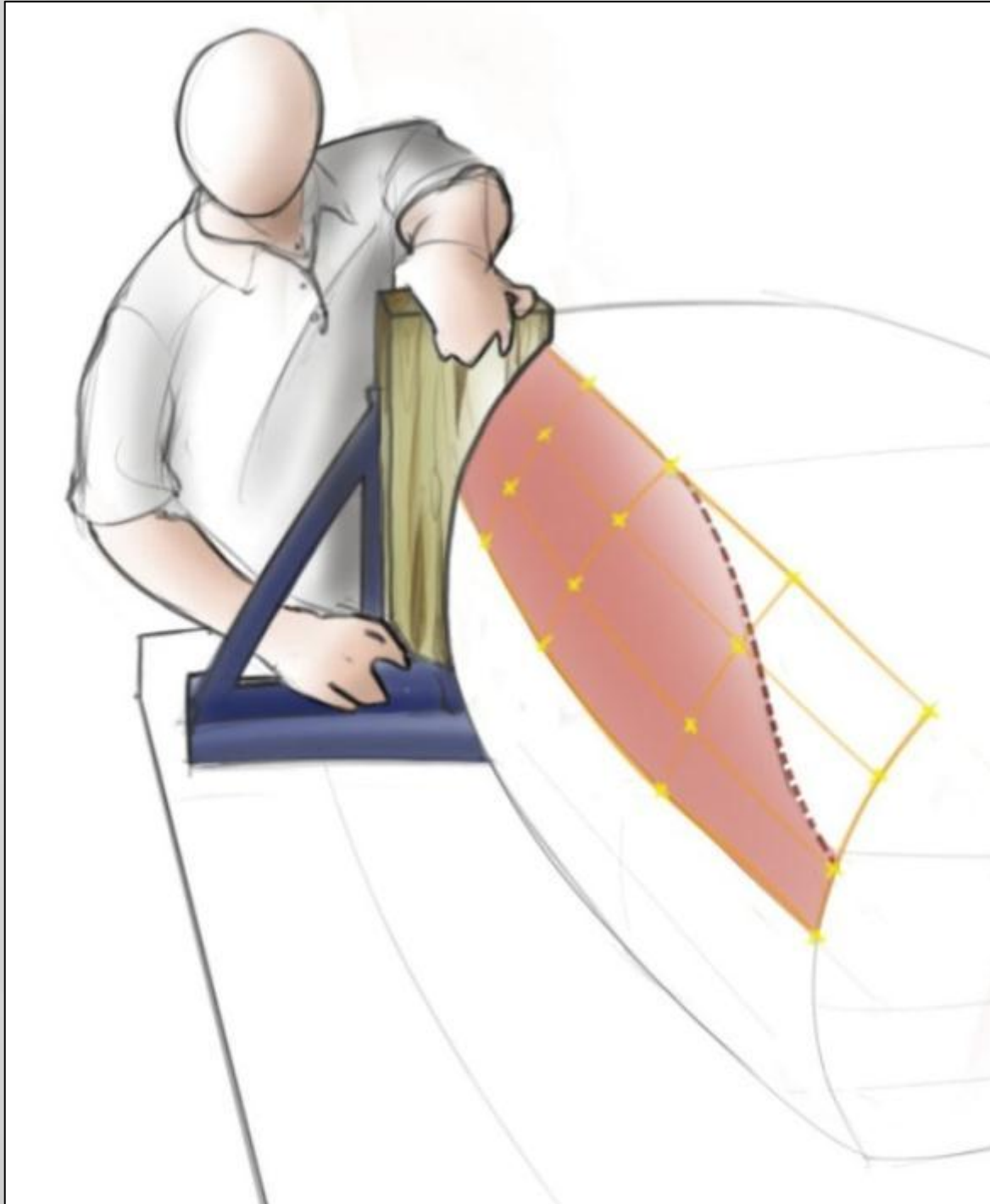






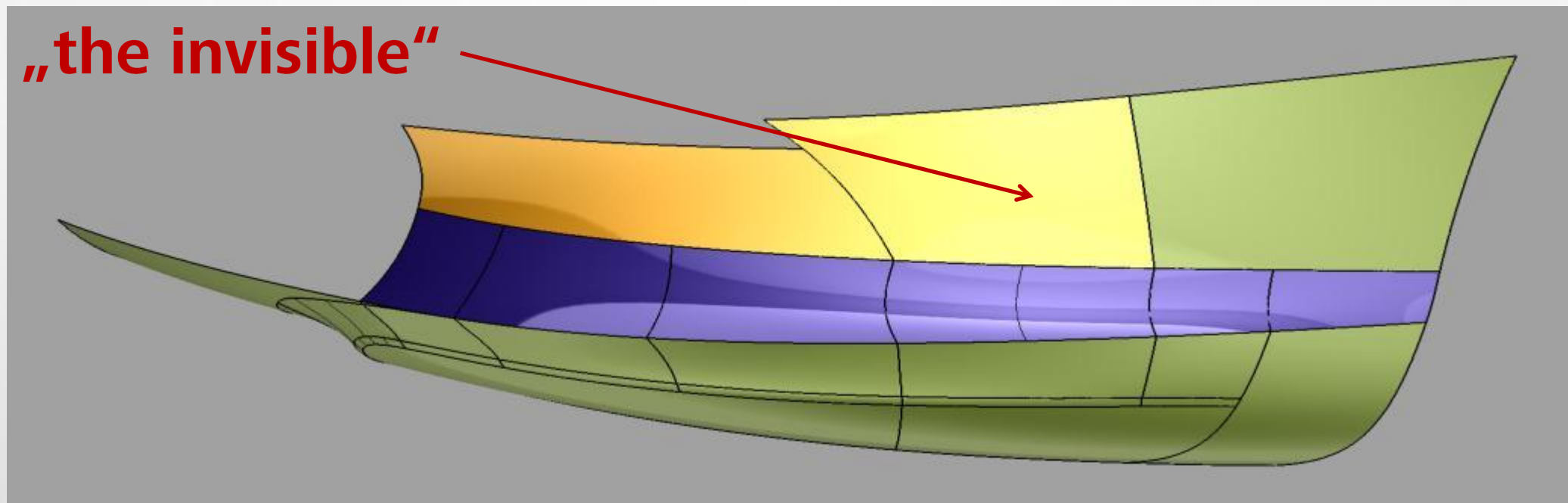
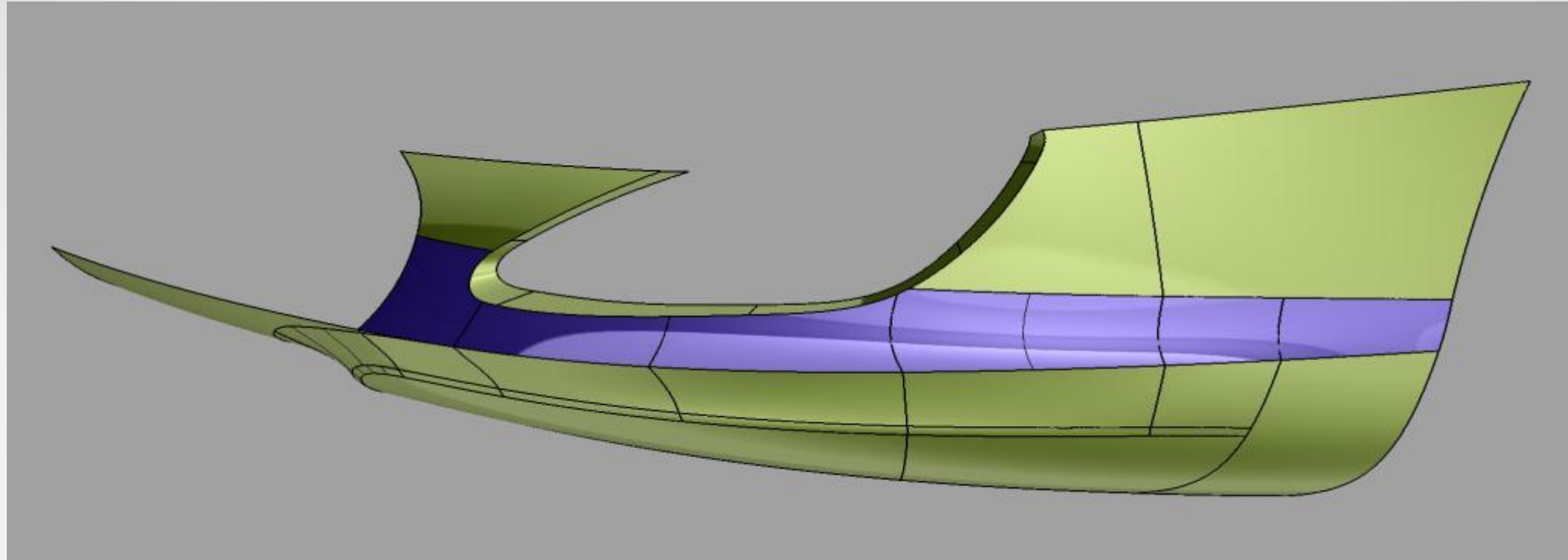


# Handcraftmanship

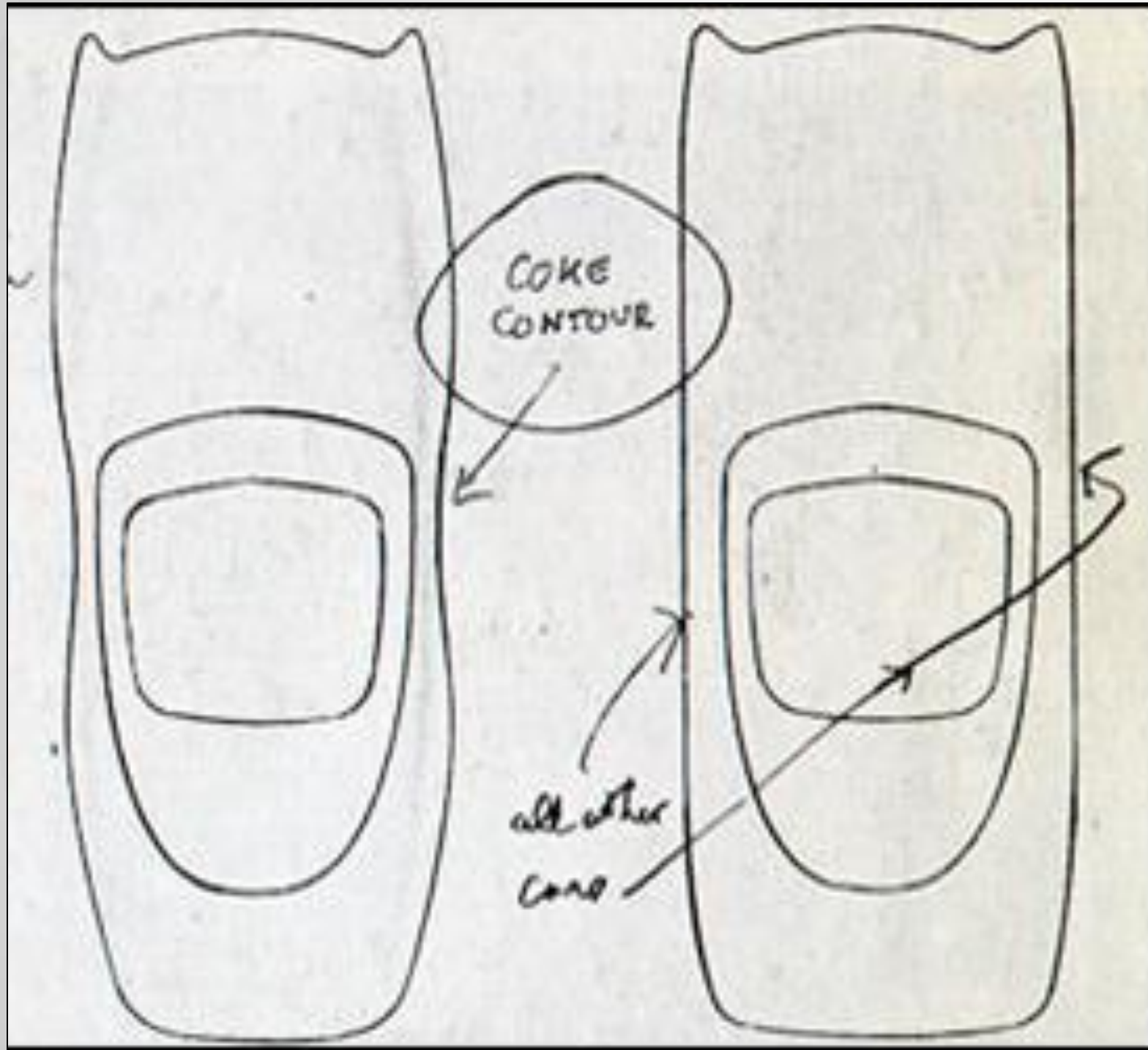




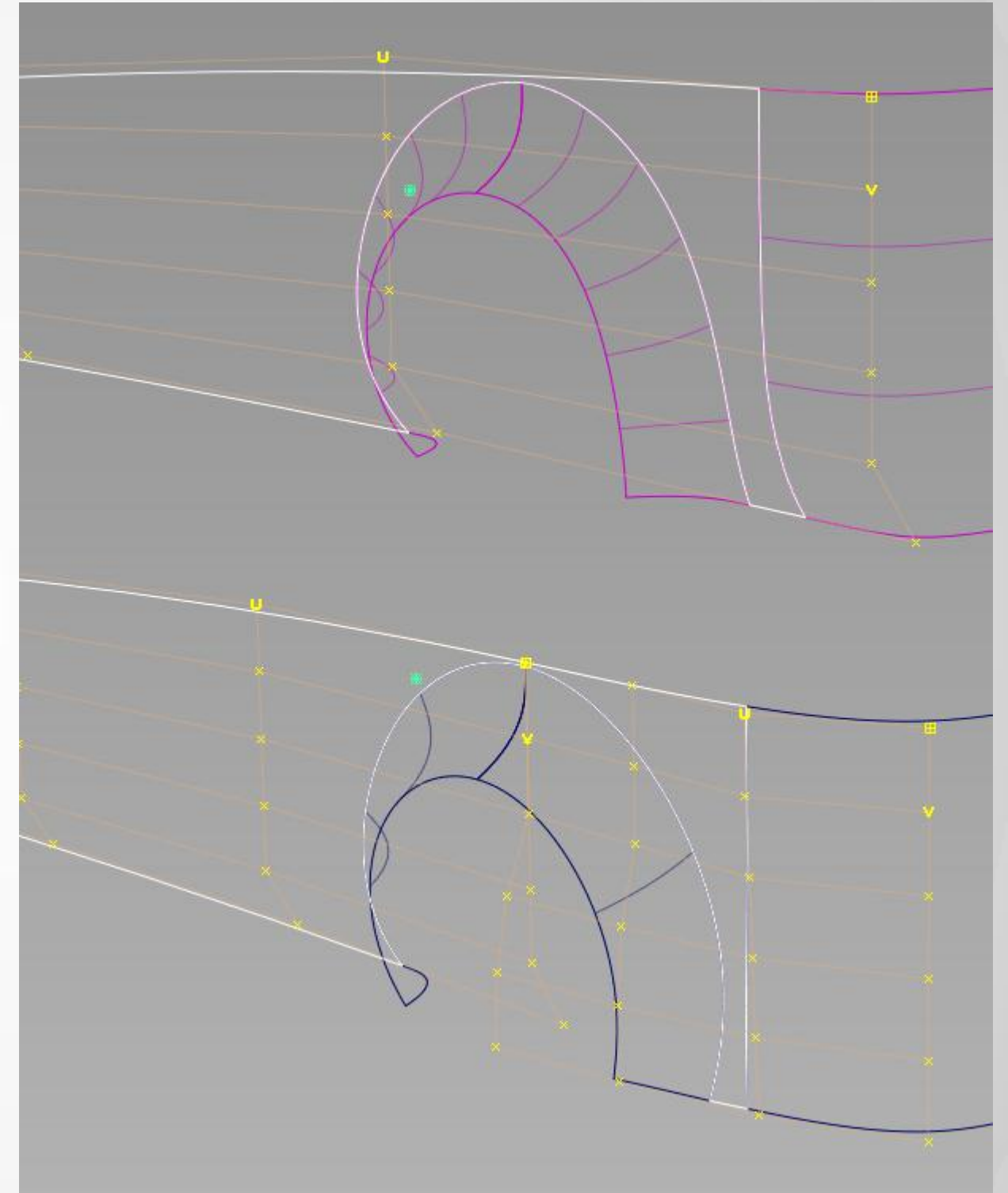
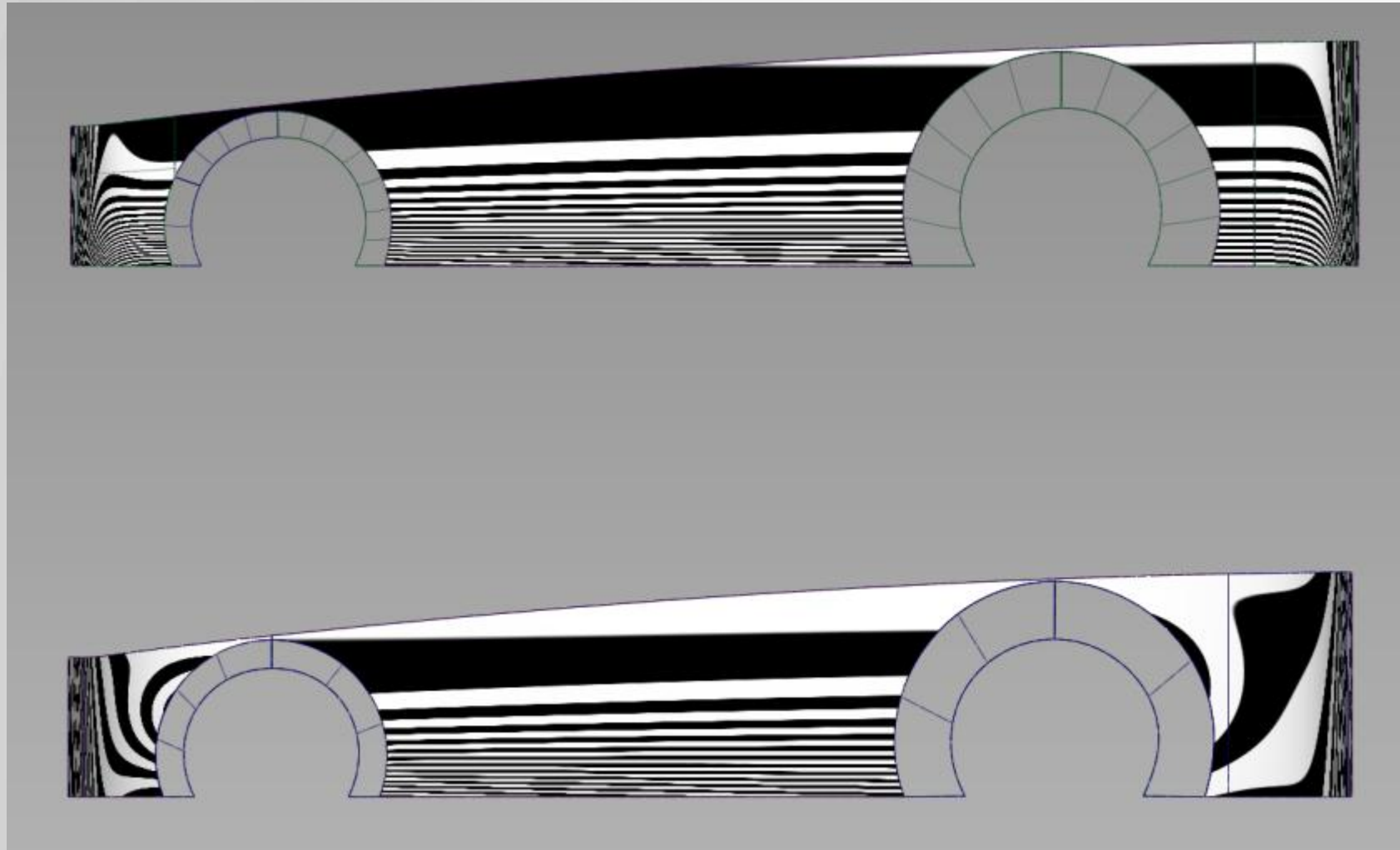
# Holding different „areas“ together



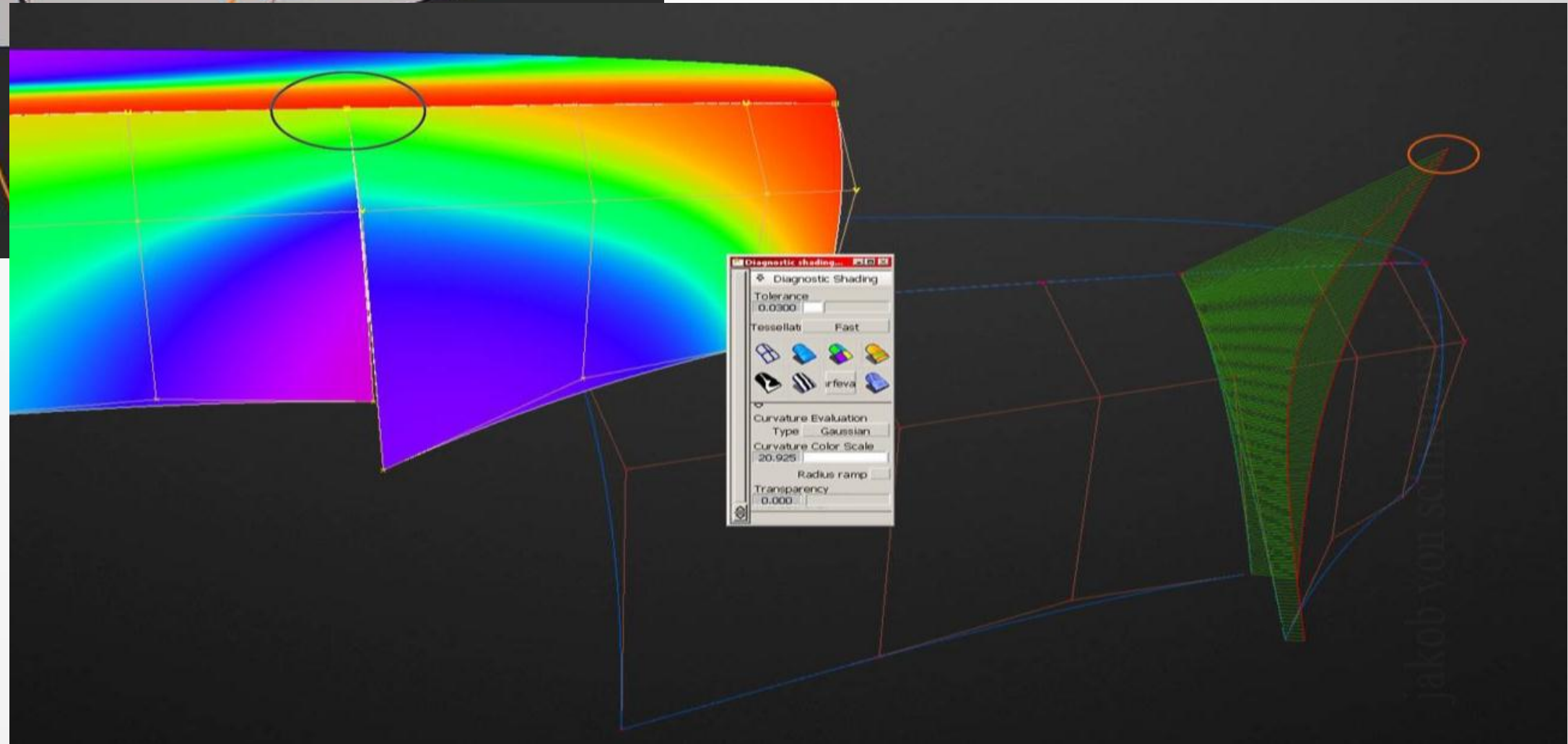
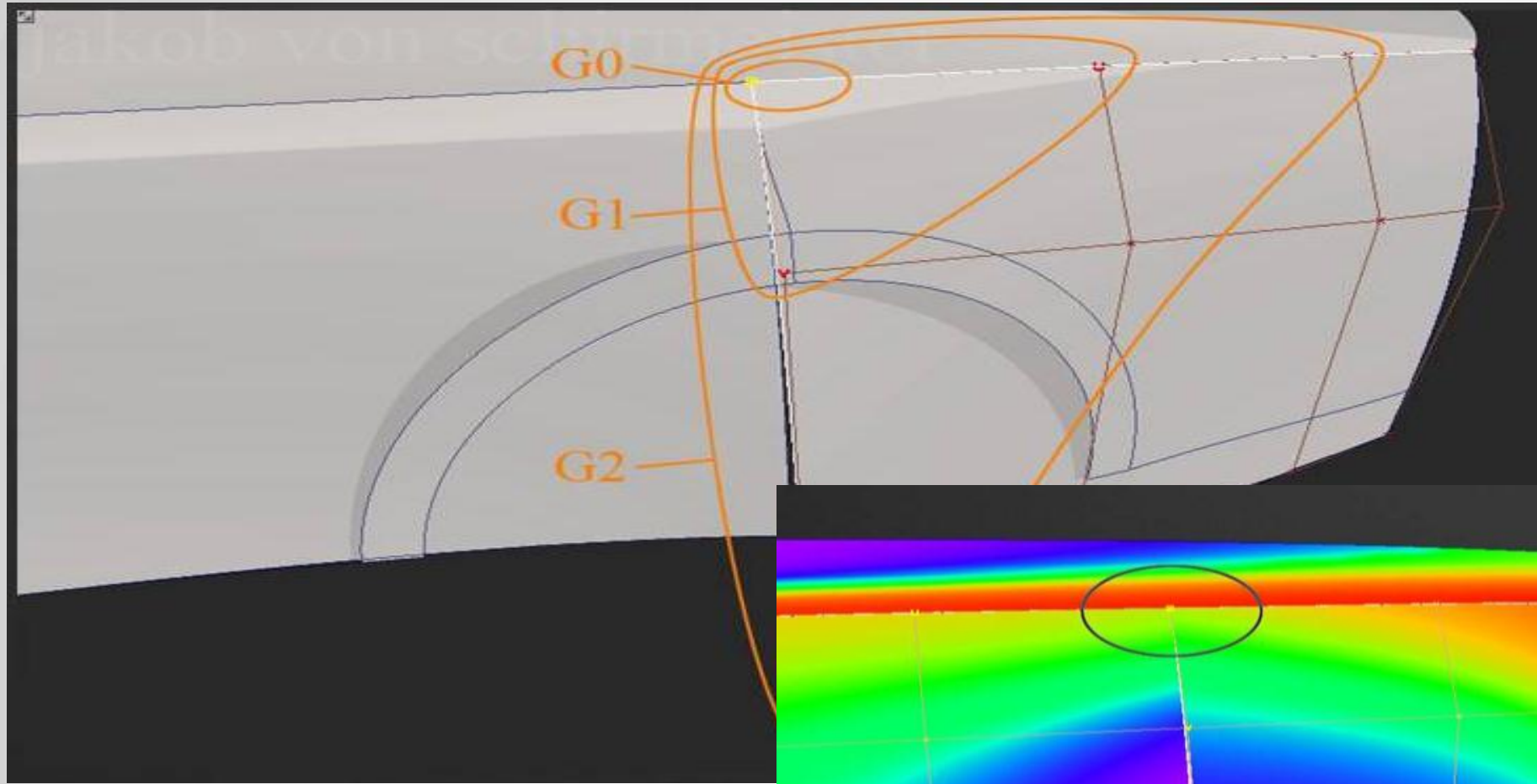
# Approach shapes

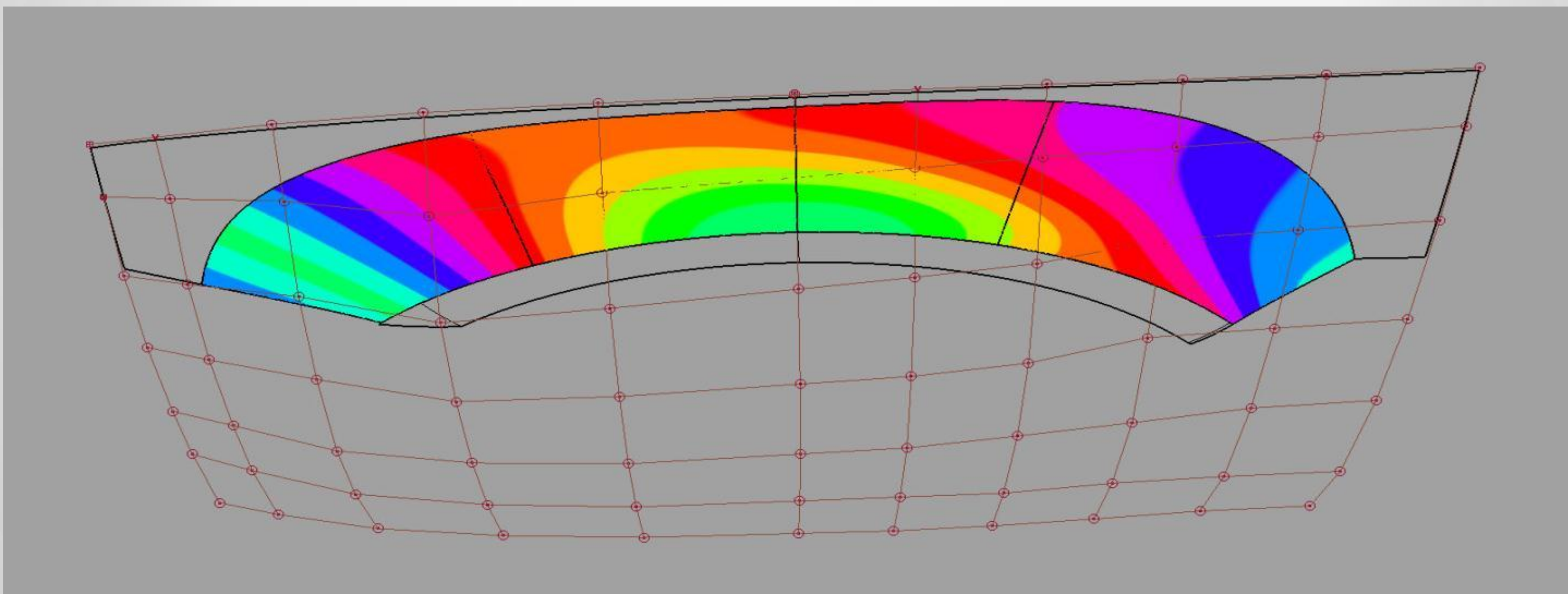


# Highlight shaping









# Key learning objectives

- Software is just another tool
- Designers draw lines while sculptors sculpt surfaces
- Lines appear as intersections of surfaces
- Theoretical edges define quality of any kind of blend
- Handcraftsmanship



