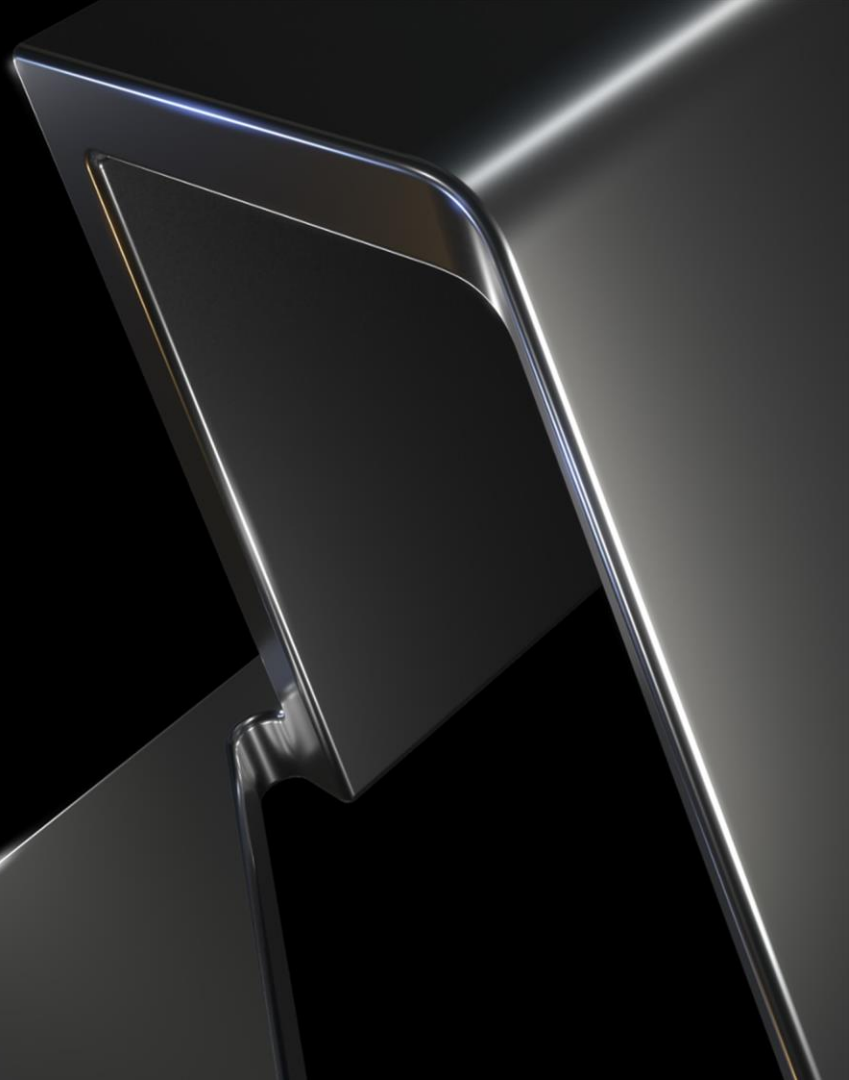
AUTODESK UNIVERSITY

Workflow from Alias SubD to VRED VR Collaborative Presention



Stefan Strohm

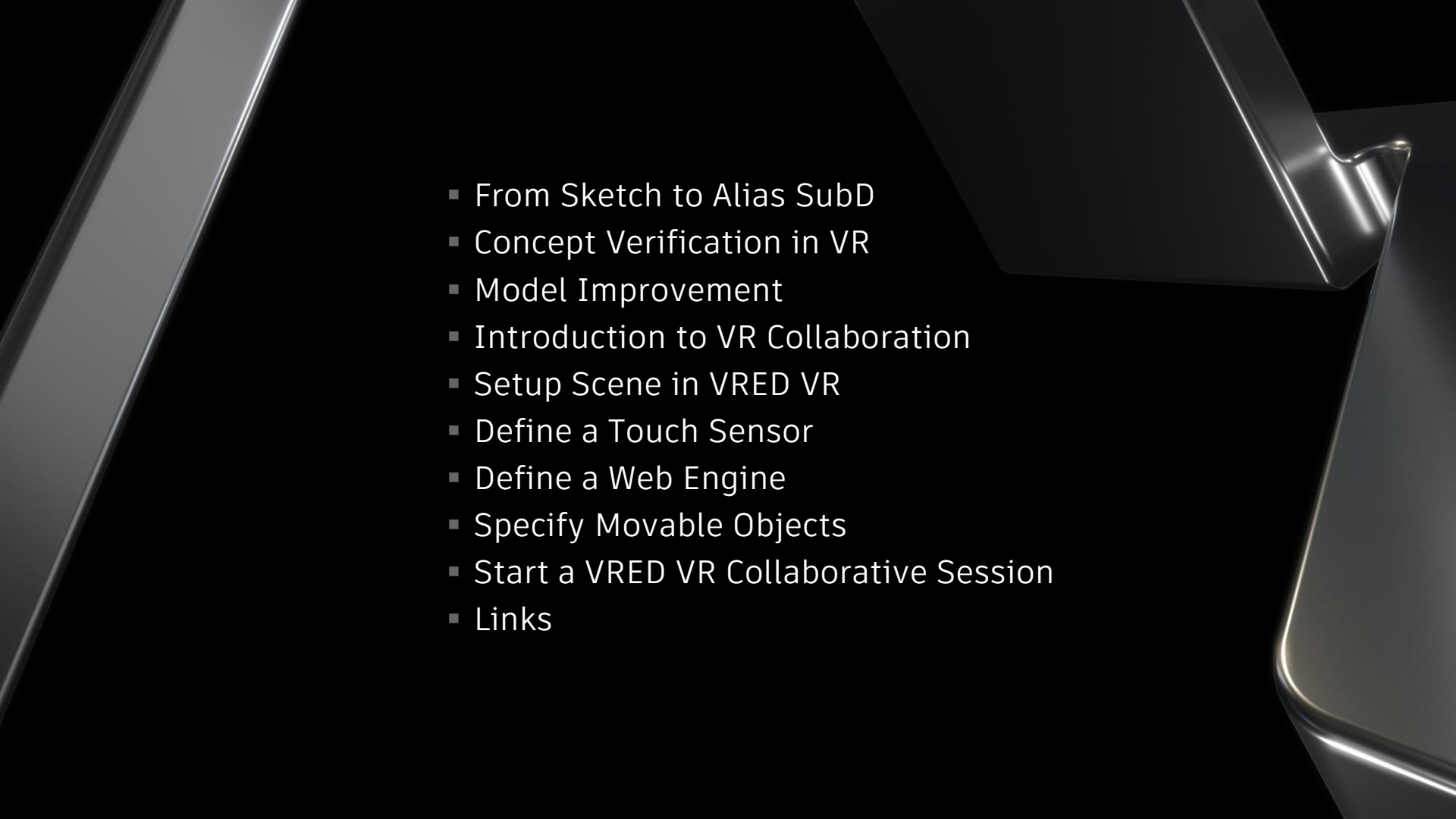
Lecturer Transportation Interior Design

Niels Vogel

Bachelor Student Transportation Interior Design

© 2021 Autodesk, Inc.

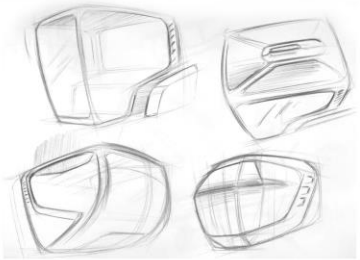
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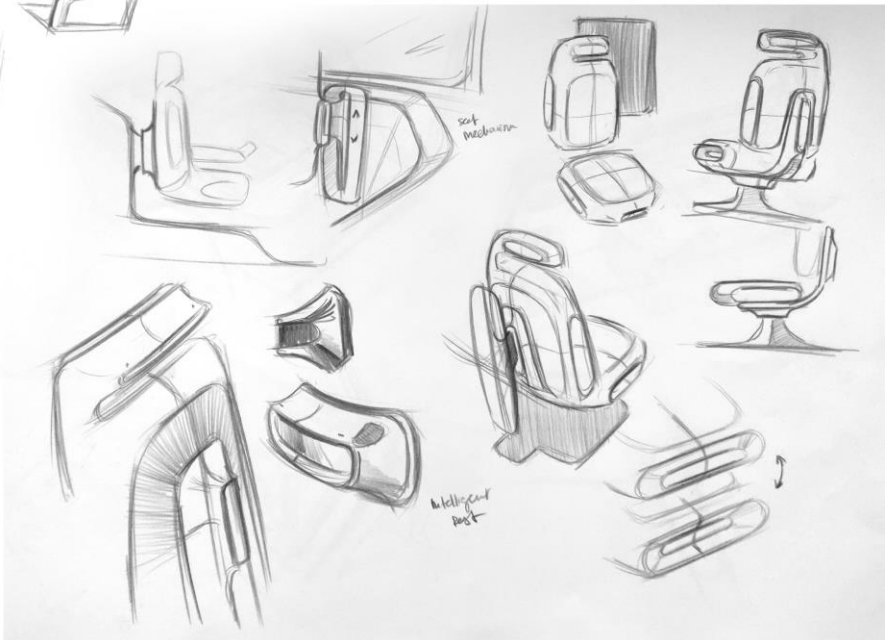


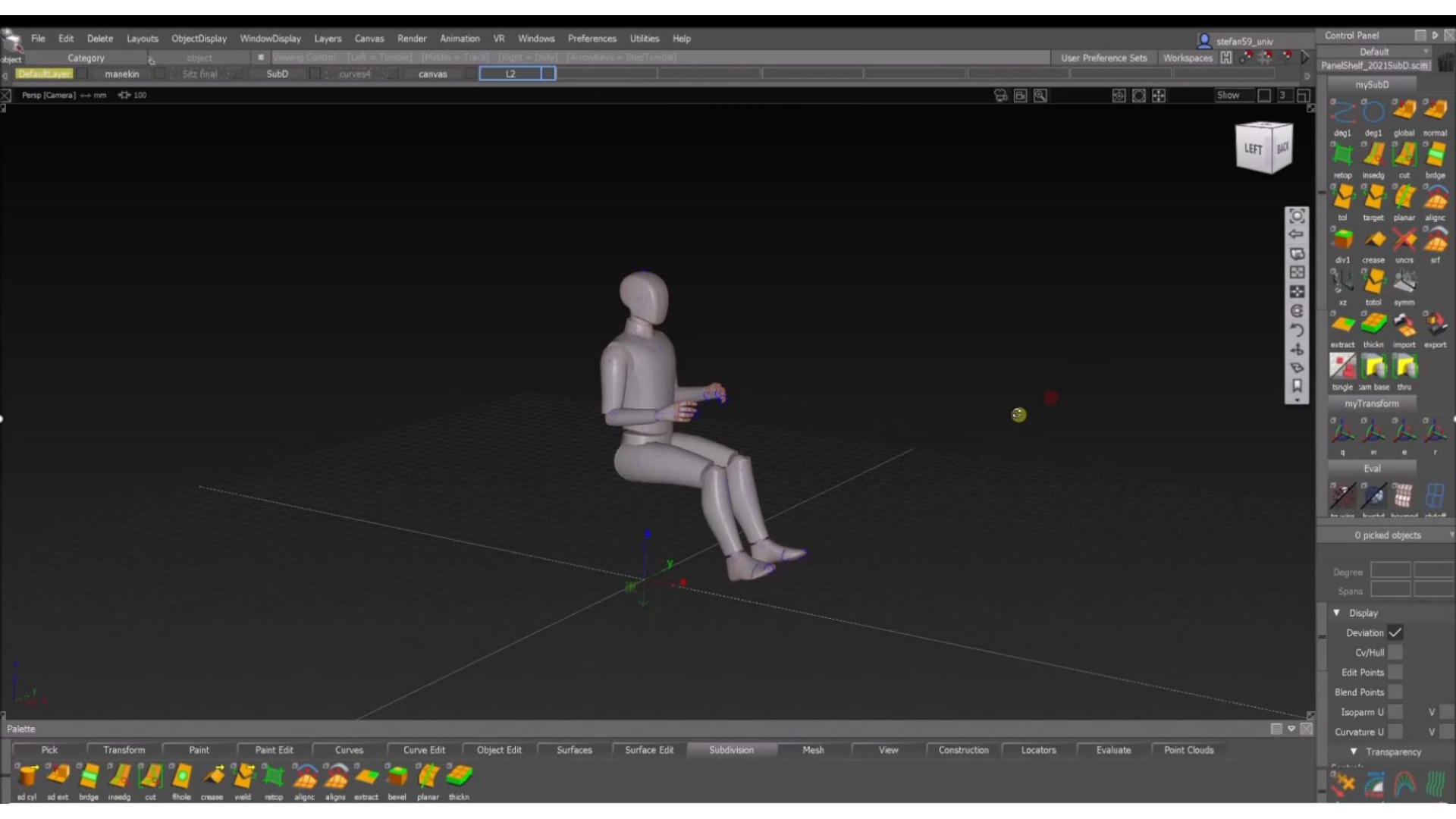
- From Sketch to Alias SubD
- Concept Verification in VR
- Model Improvement
- Introduction to VR Collaboration
- Setup Scene in VRED VR
- Define a Touch Sensor
- Define a Web Engine
- Specify Movable Objects
- Start a VRED VR Collaborative Session
- Links

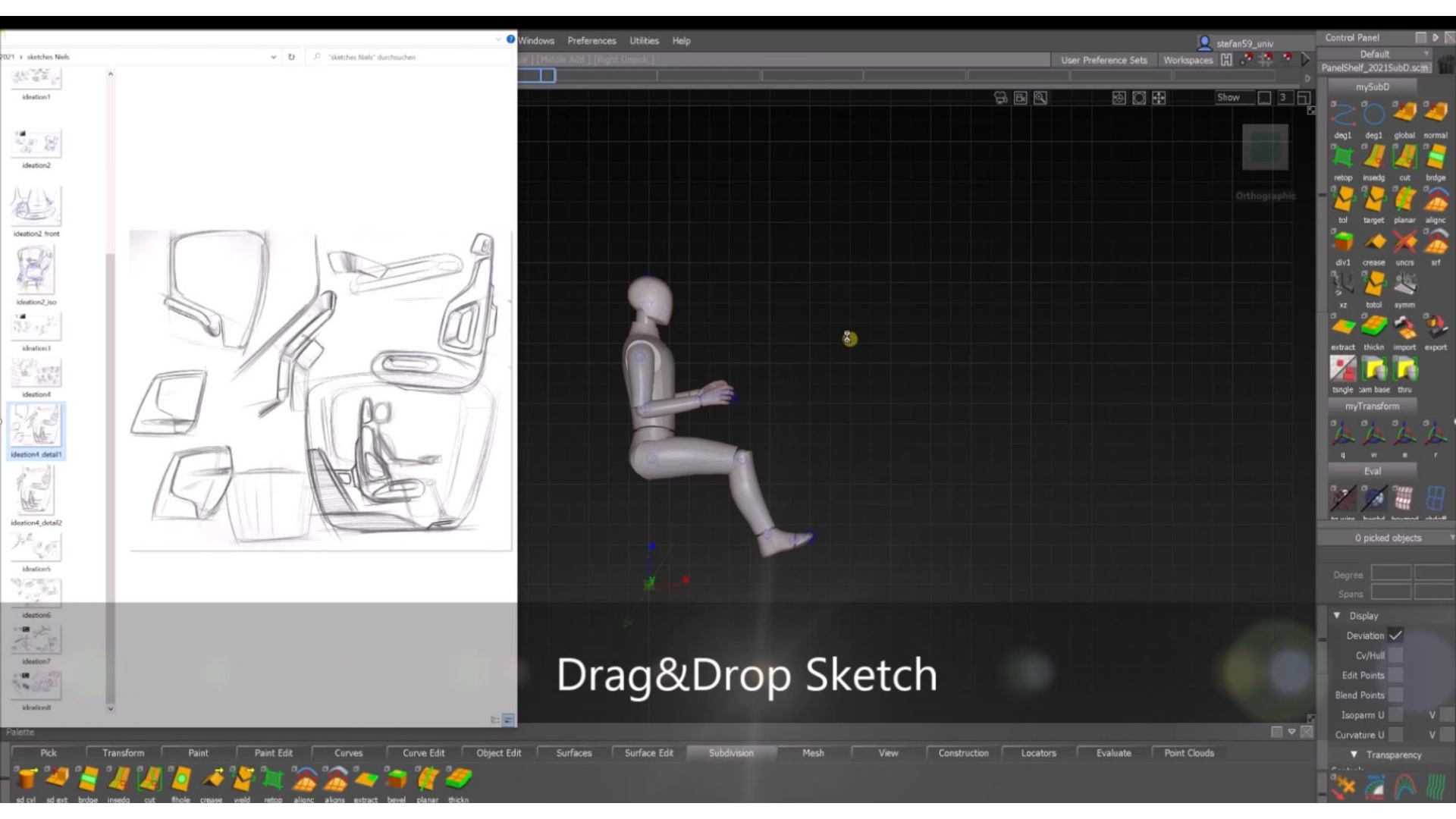
From Sketch to Alias SubD

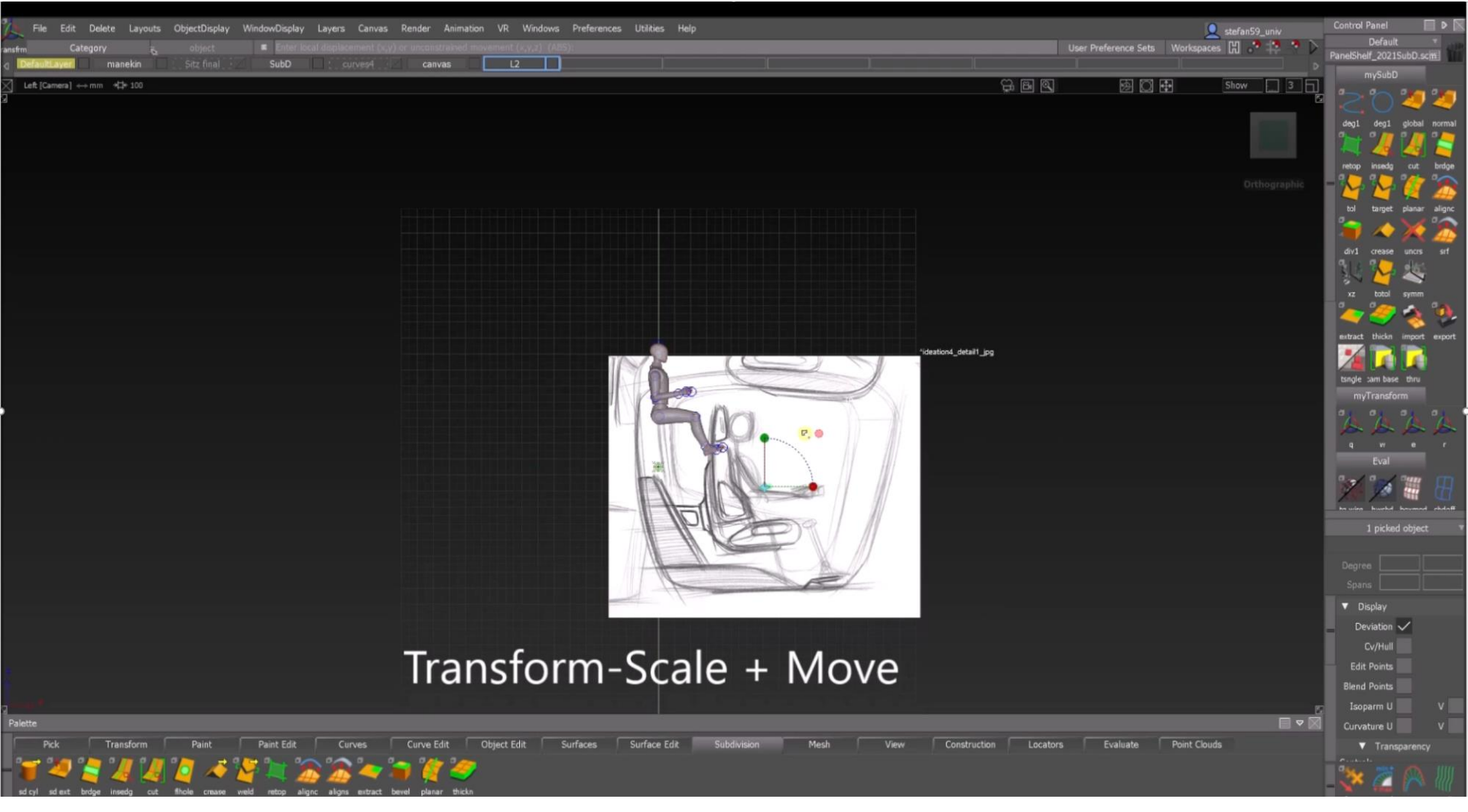


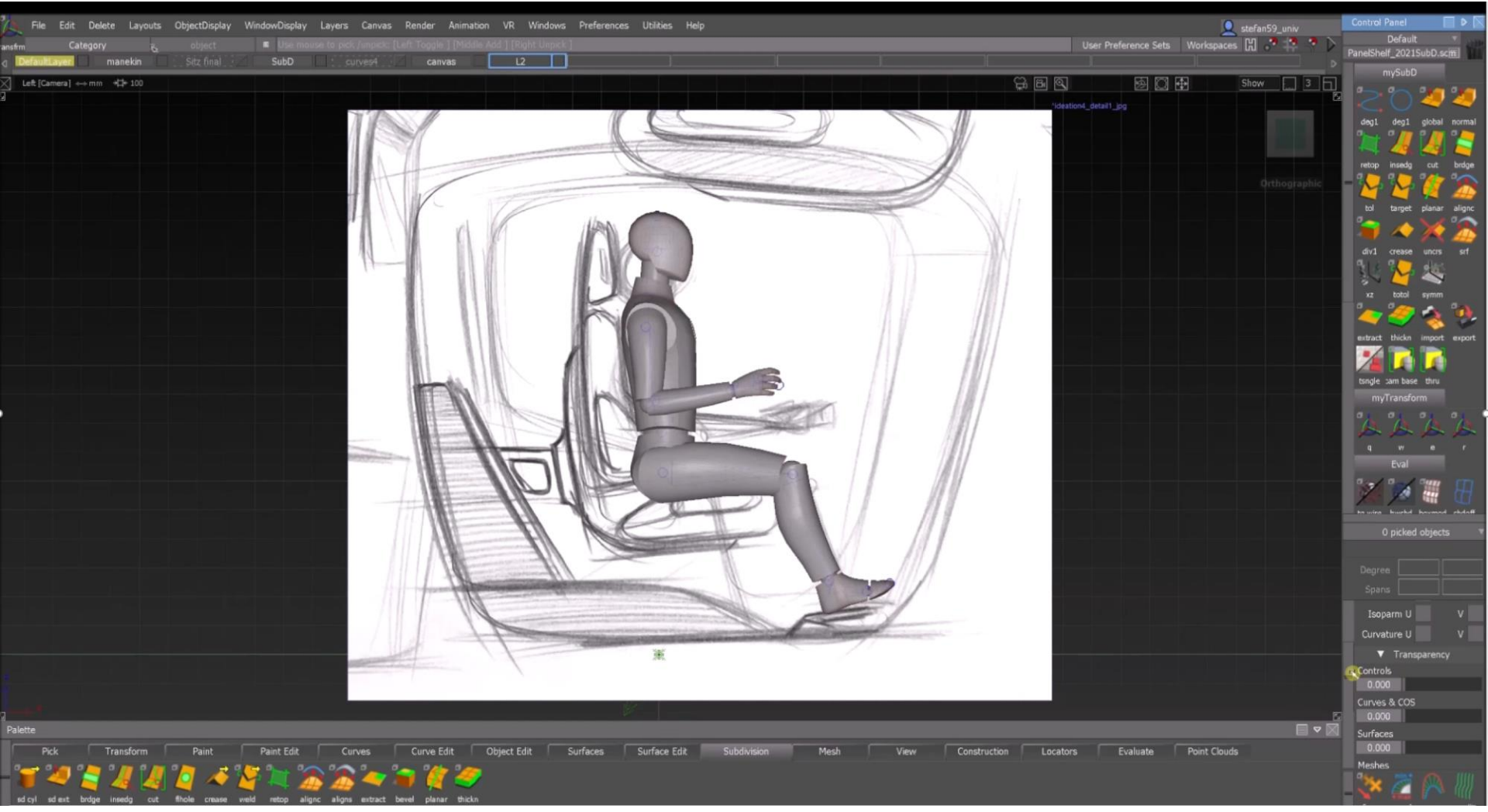


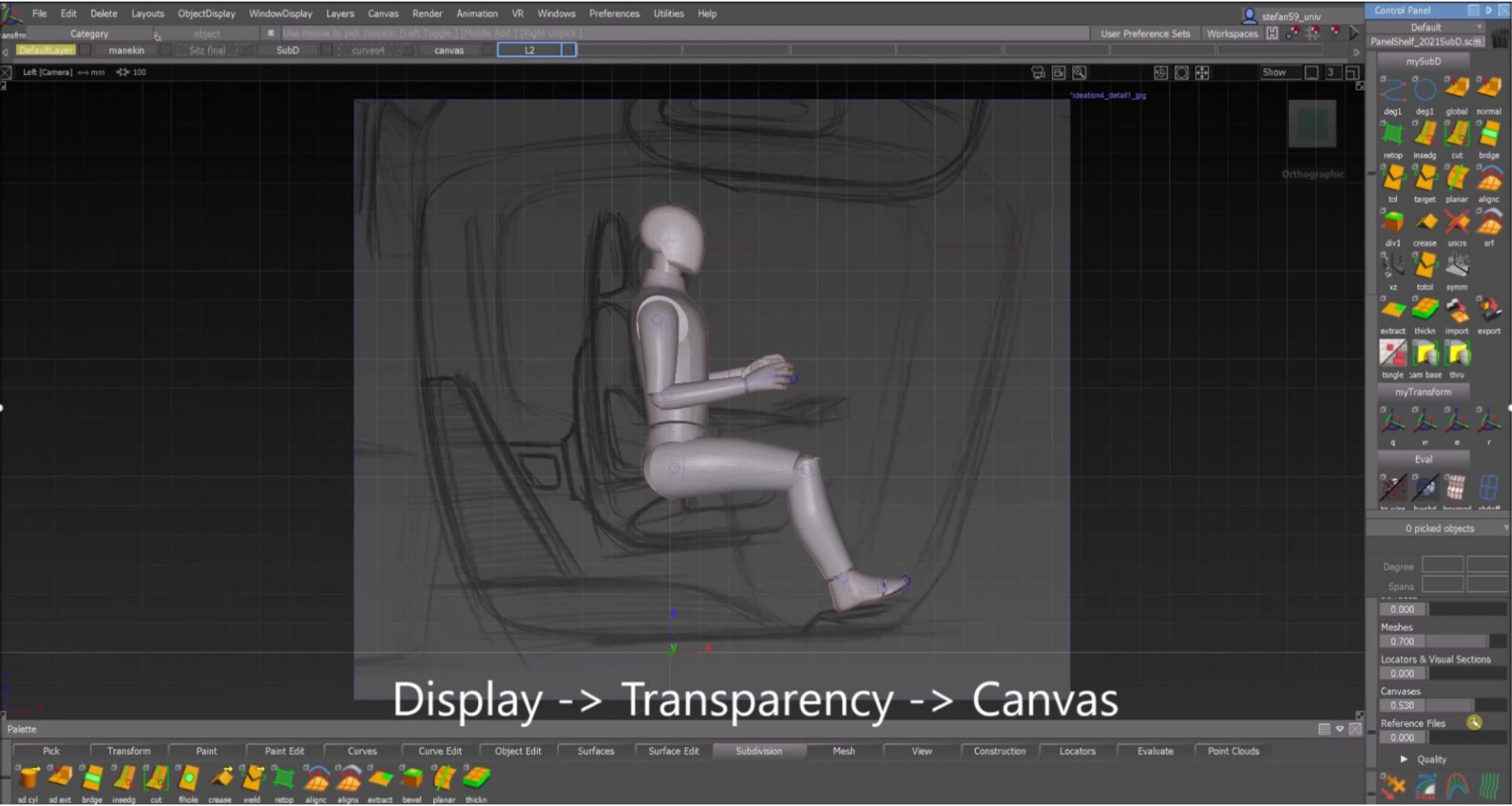


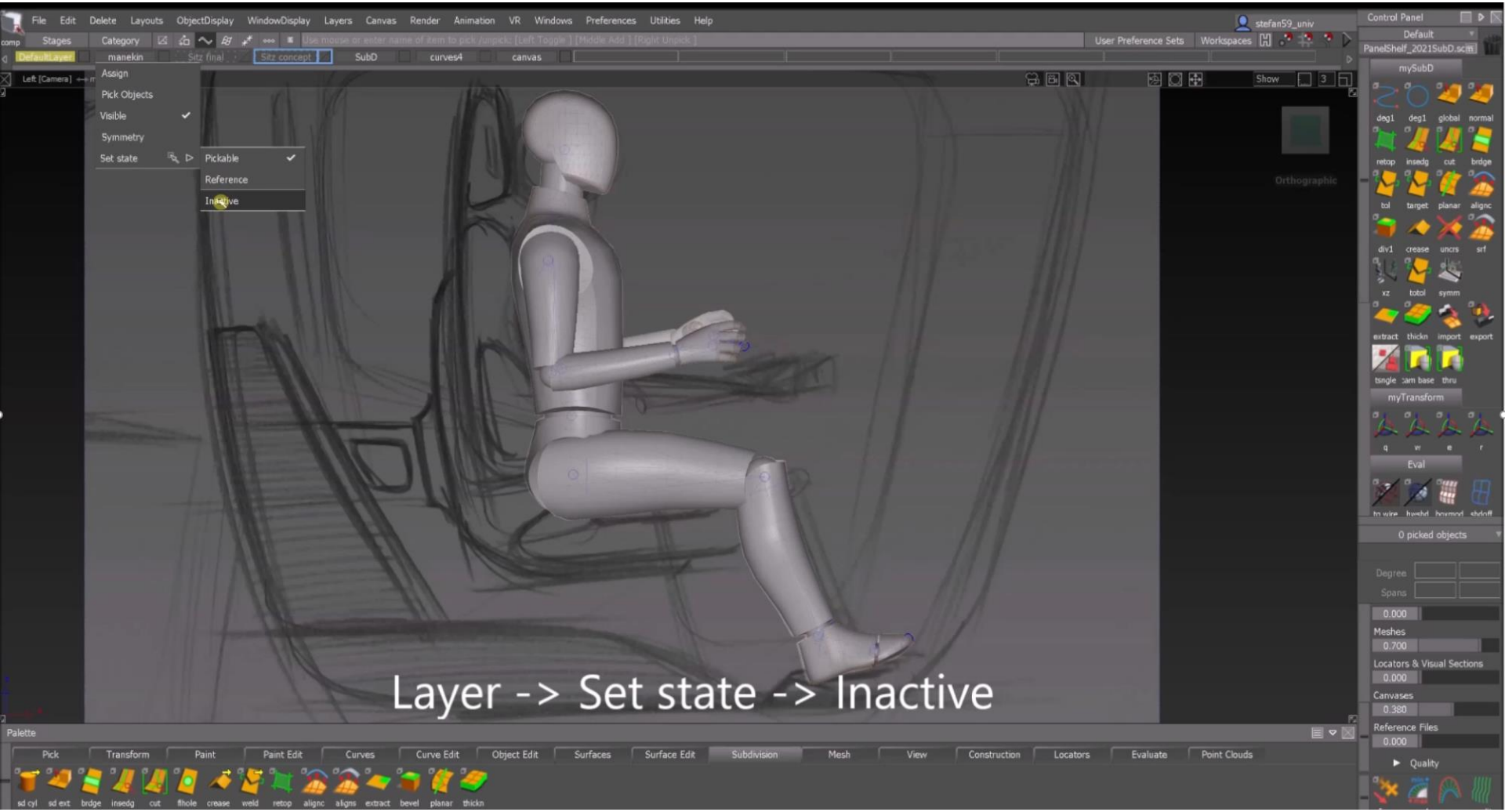

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ideation4_detail1
ideation4_detail2
ideation5
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ideation7
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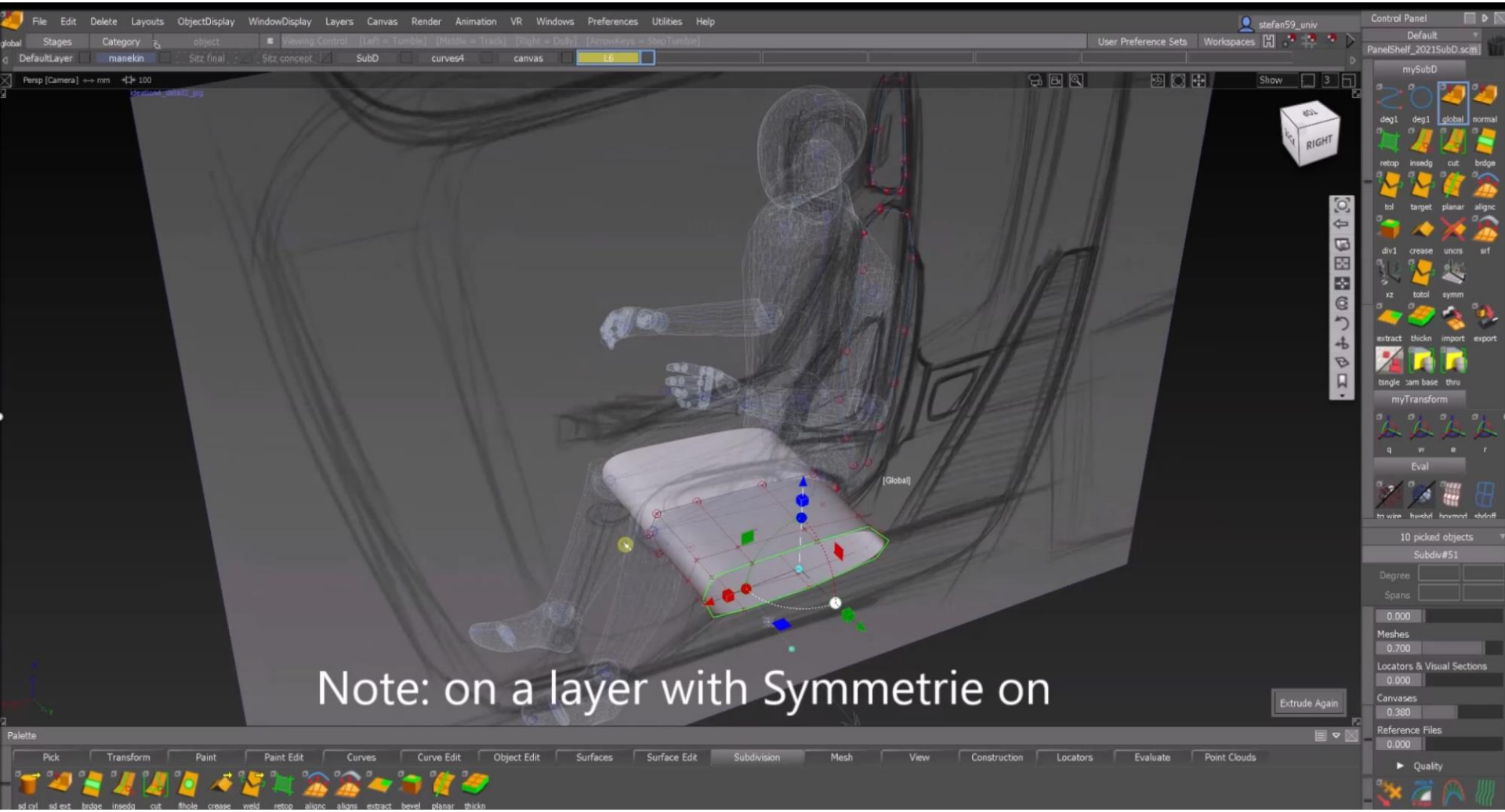

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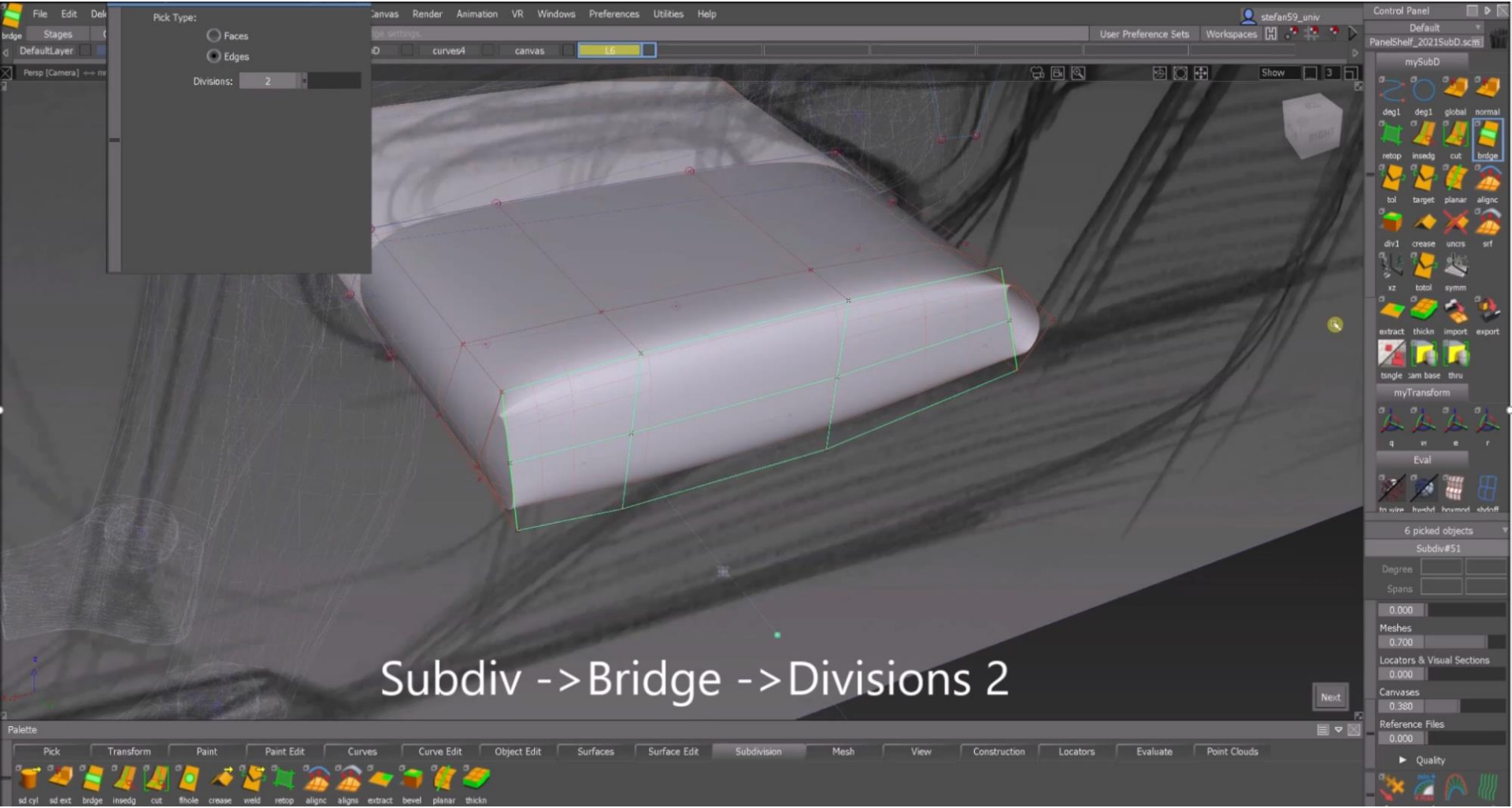

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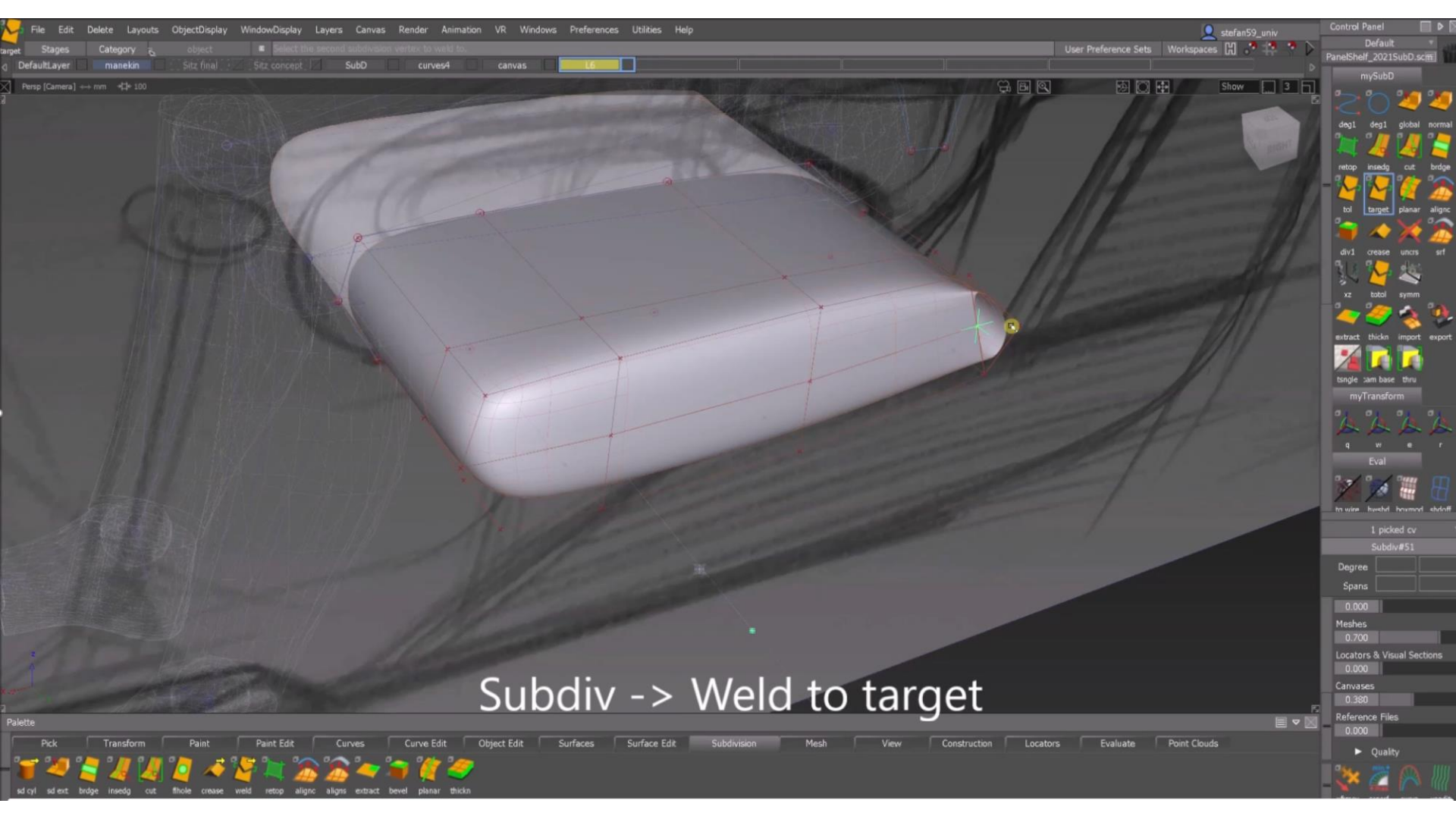

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Pick Objects
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Layer -> Set state -> Inactive

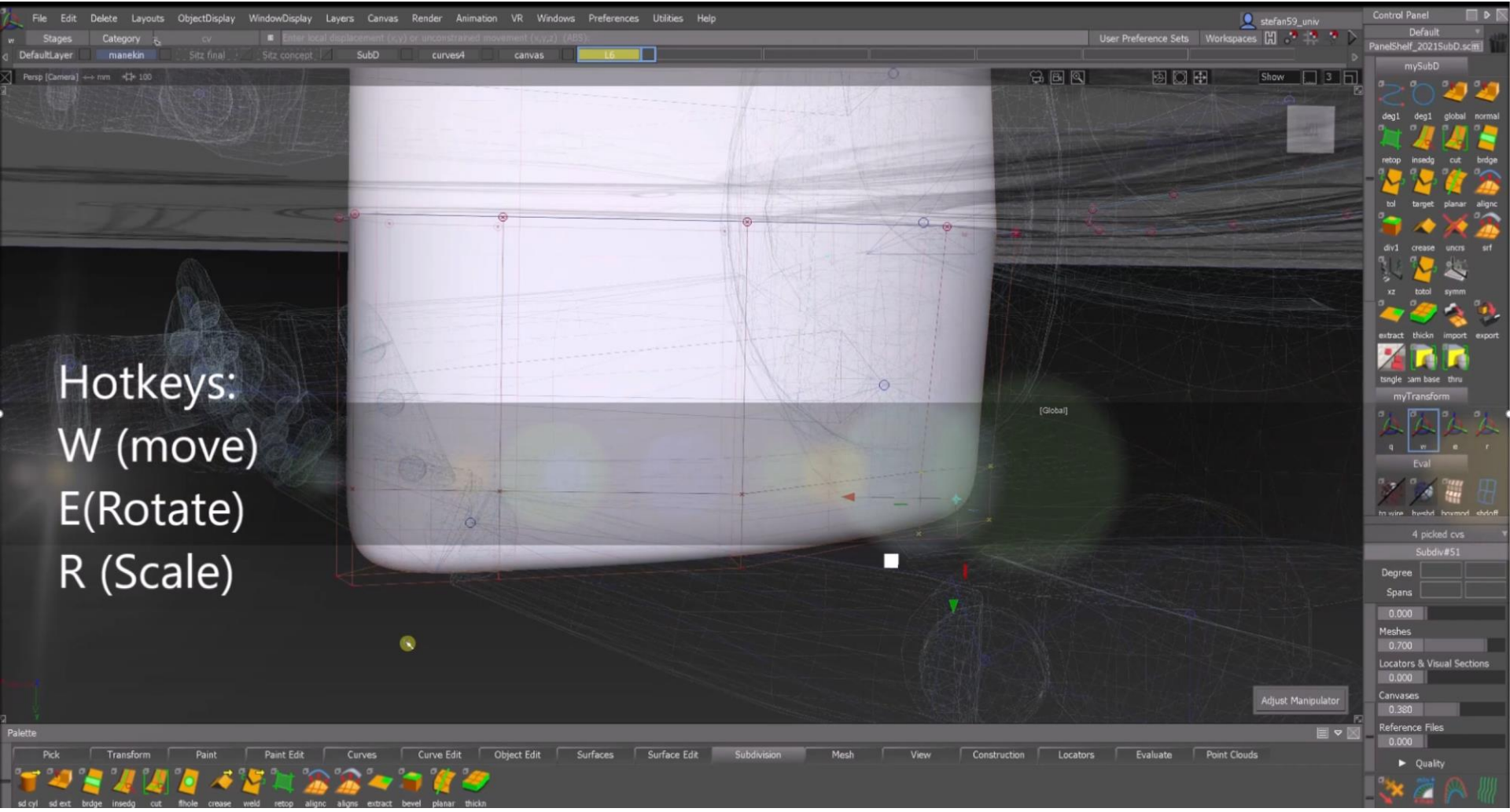

File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
Stages Category
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Next Curve
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curve#2
Degree 1
Spans 10
Meshes
Locators & Visual Sections
Canvases
Reference Files
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Palette
Pick Transform Paint Paint Edit Curves Curve Edit Object Edit Surfaces Surface Edit Subdivision Mesh View Construction Locators Evaluate Point Clouds

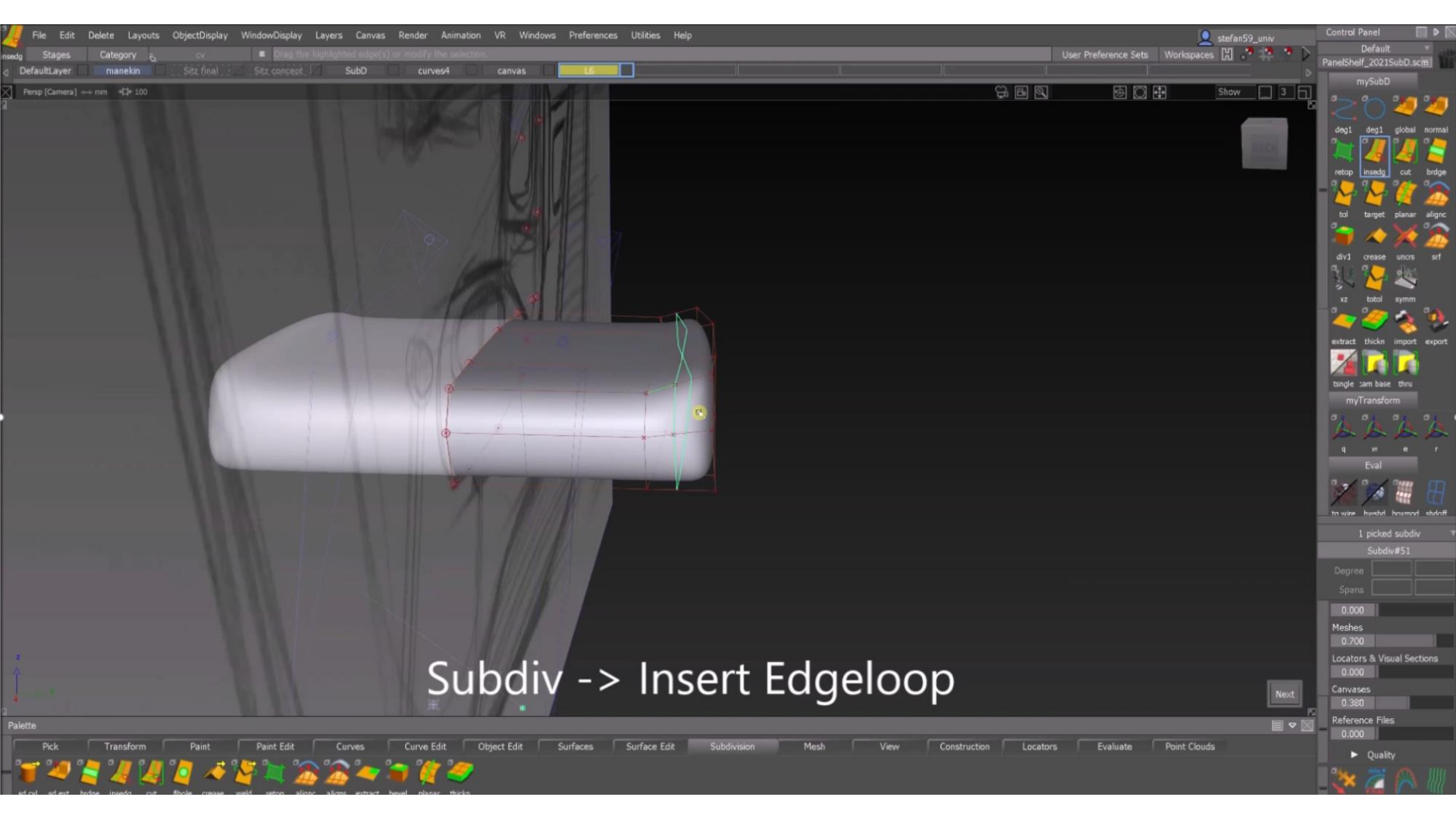

File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
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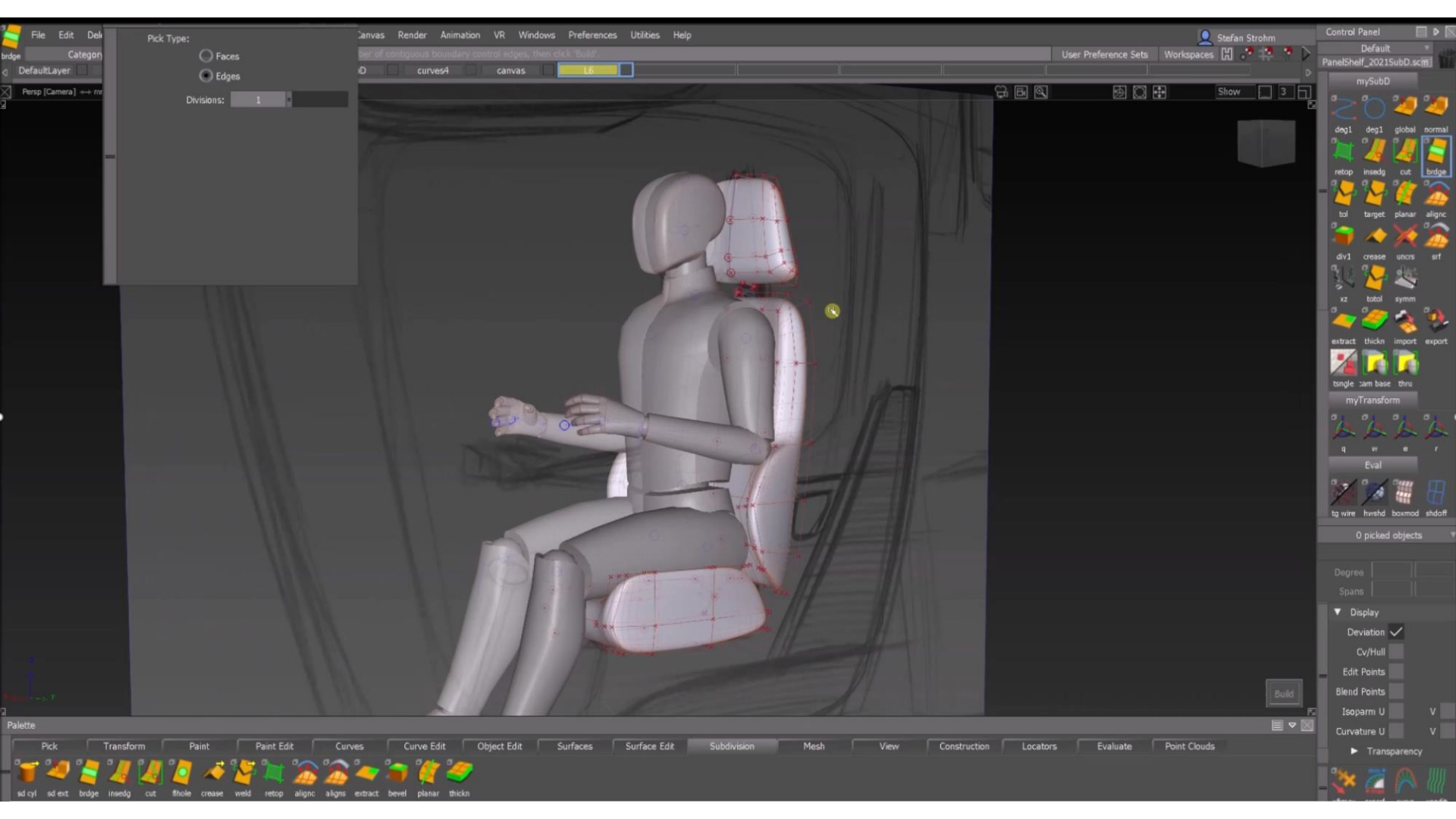

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Control Panel
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[Global]
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Pick Type:
Faces
Edges
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Next

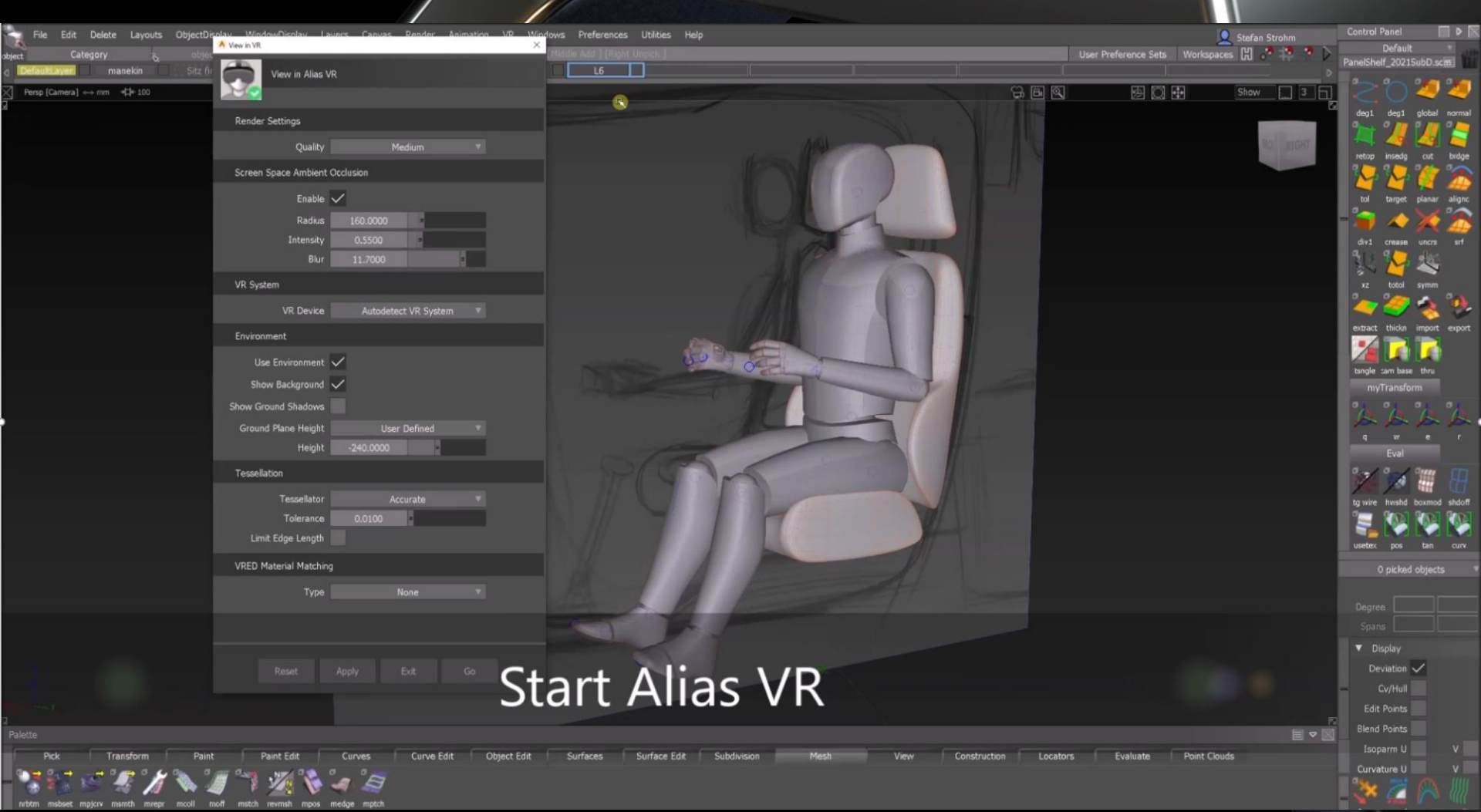

Subdiv -> Weld to target

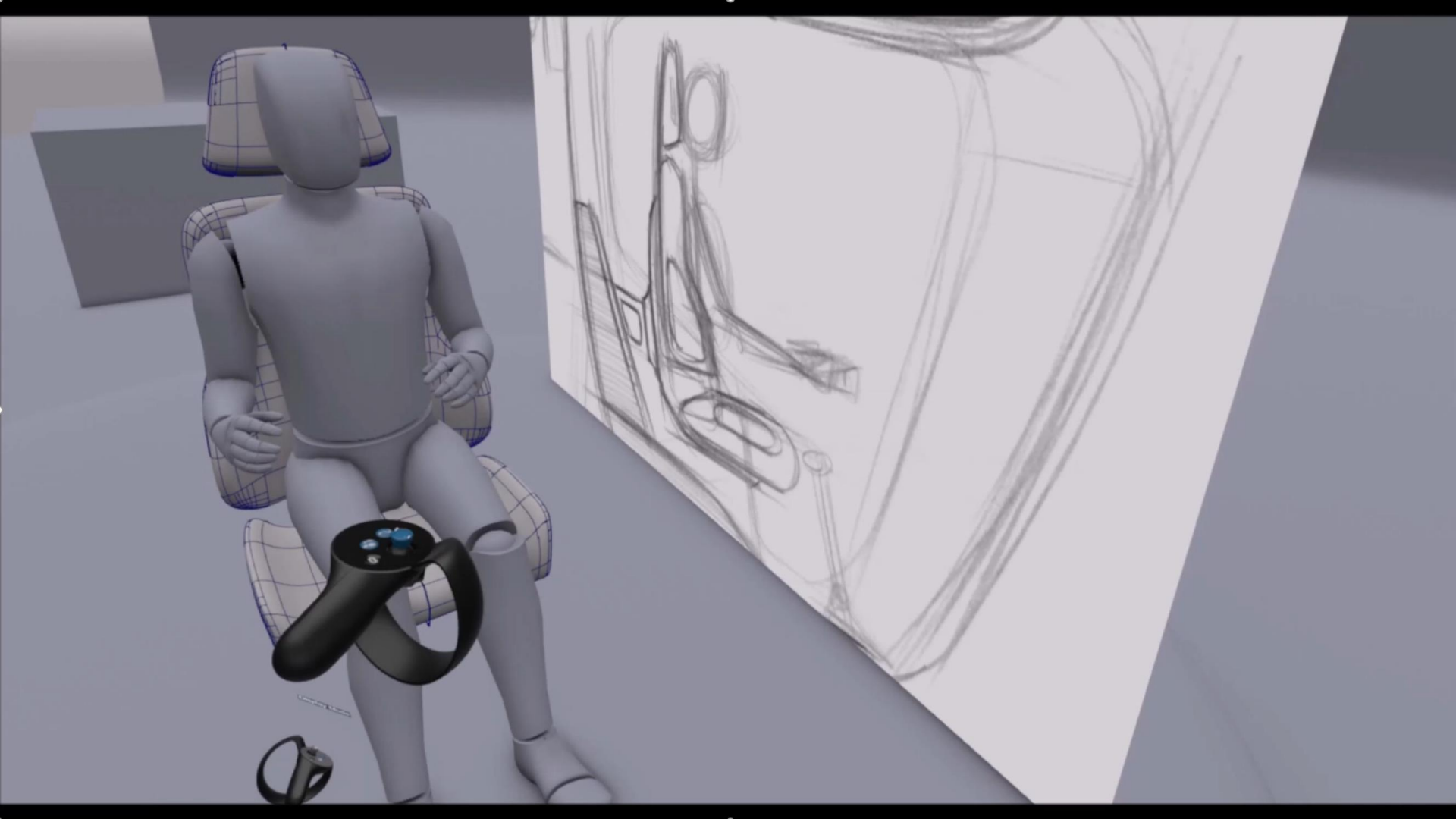

Hotkeys:
W (move)
E(Rotate)
R (Scale)
File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
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Degree
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Locators & Visual Sections
Canvases
Reference Files
Quality


Subdiv -> Insert Edgeloop

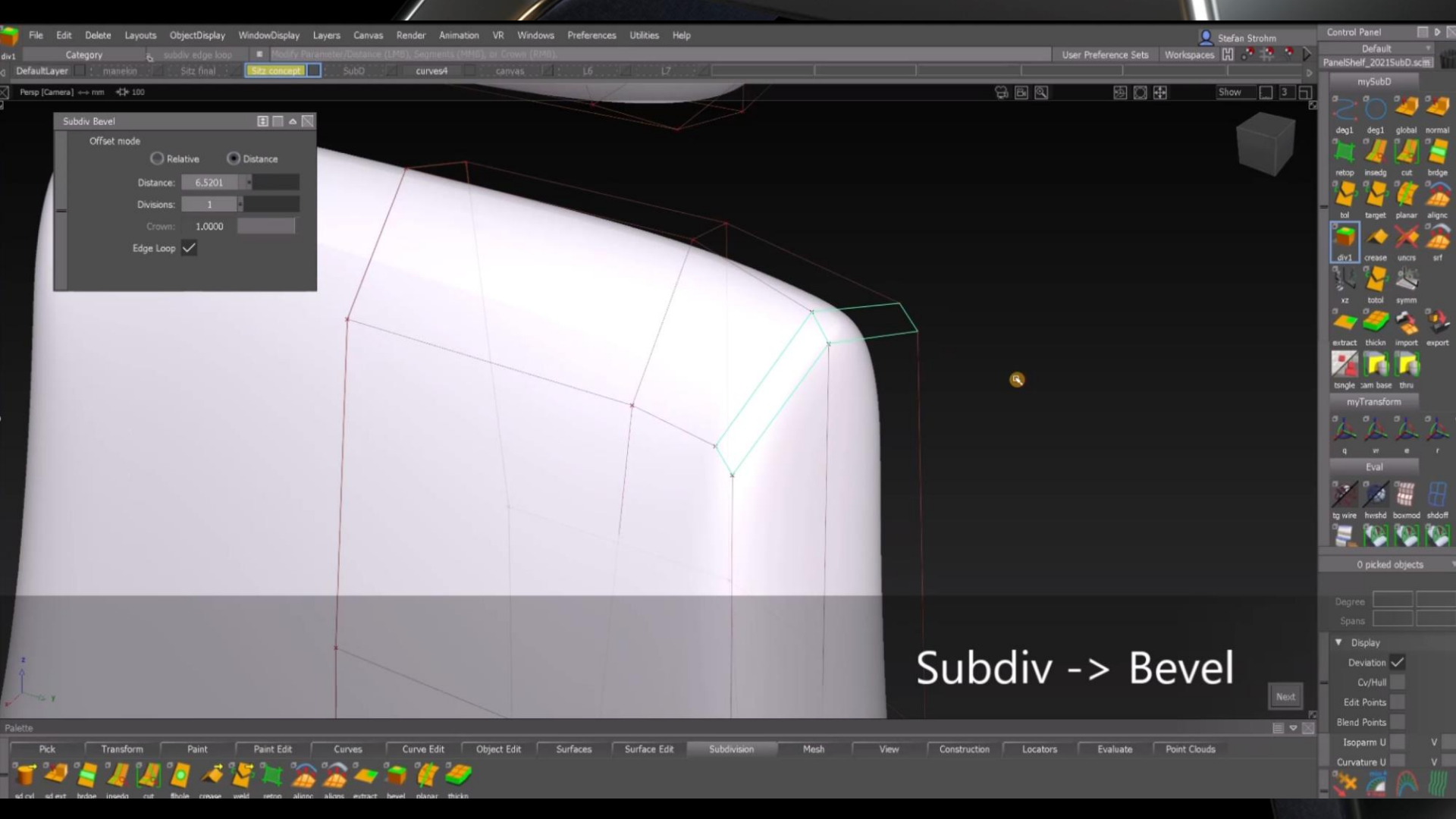

File
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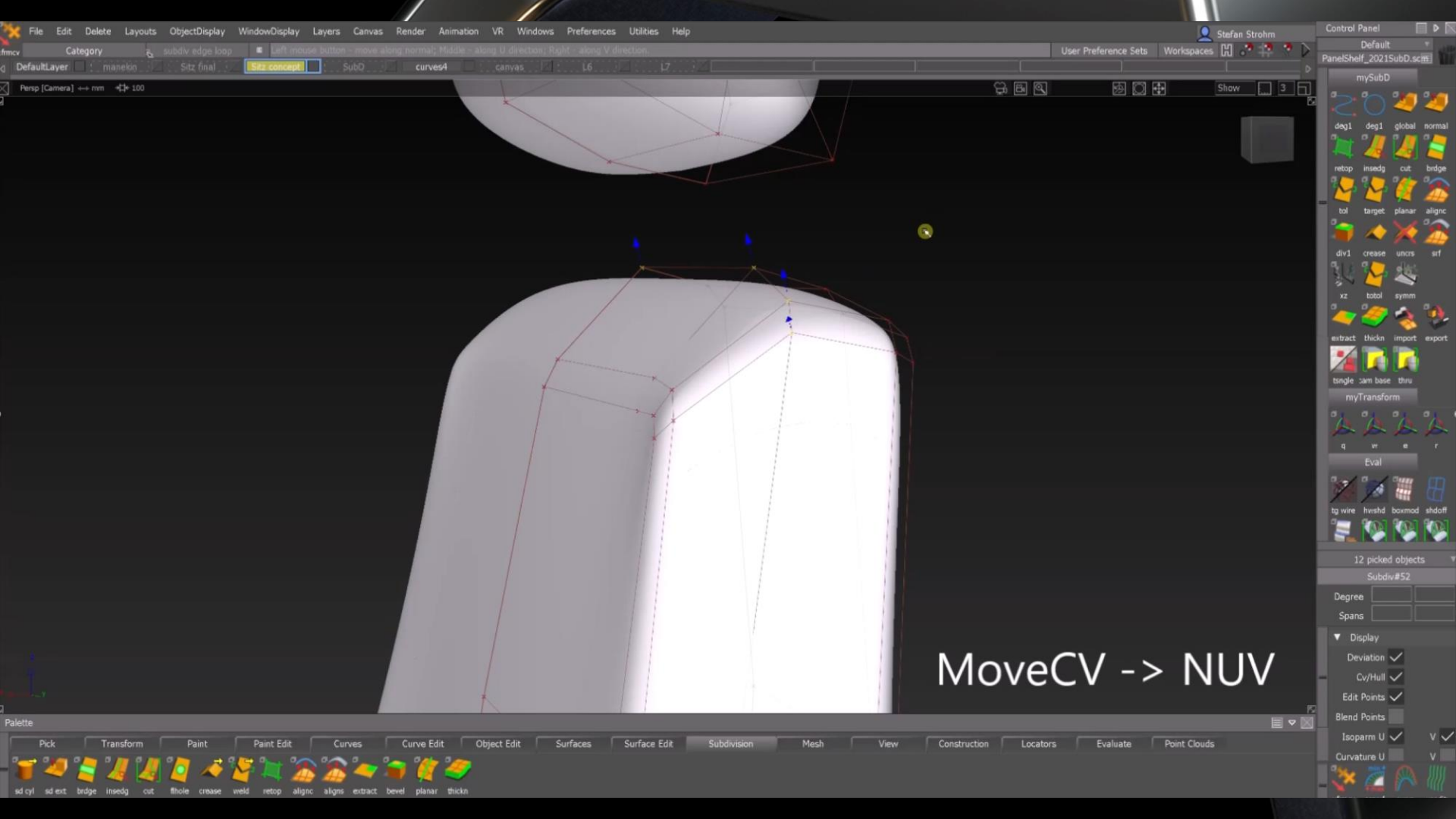
Concept Verification in VR

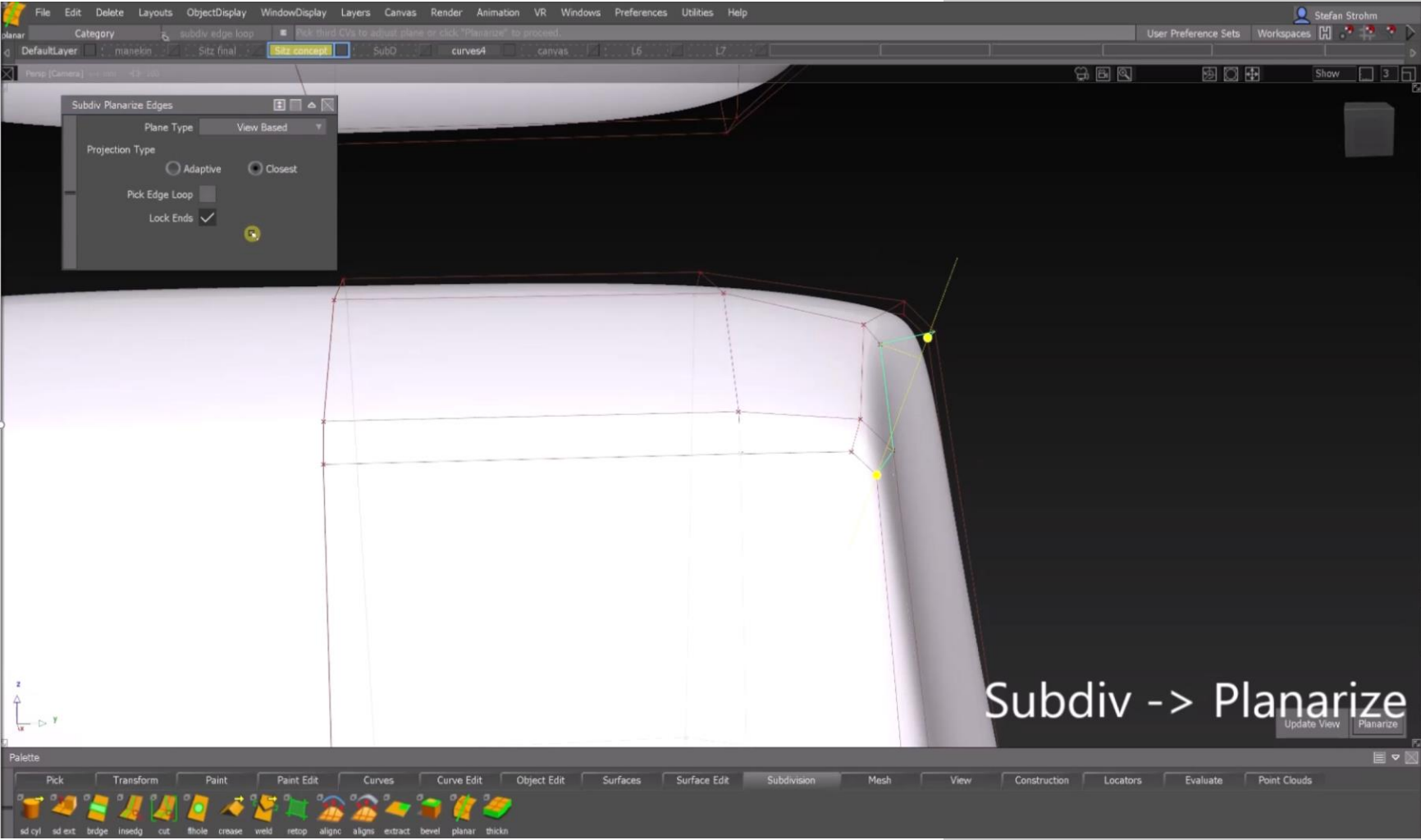

View in VR
View in Alias VR
Render Settings
Quality
Medium
Screen Space Ambient Occlusion
Enable
Radius
160.0000
Intensity
0.5500
Blur
11.7000
VR System
VR Device
Autodetect VR System
Environment
Use Environment
Show Background
Show Ground Shadows
Ground Plane Height
User Defined
Height
-240.0000
Tessellation
Tessellator
Accurate
Tolerance
0.0100
Limit Edge Length
VRED Material Matching
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Apply
Exit
Go
Start Alias VR

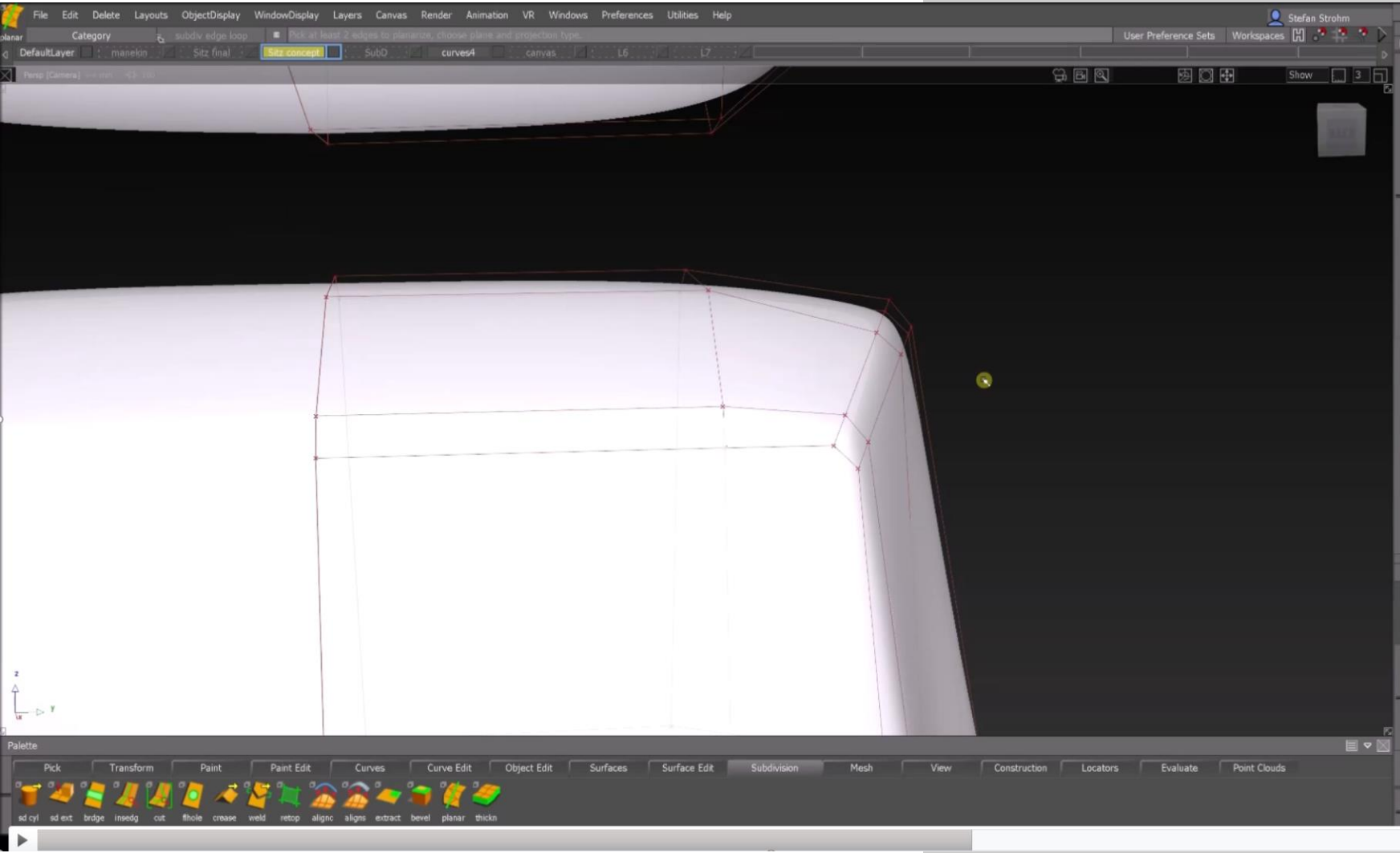


Model Improvement

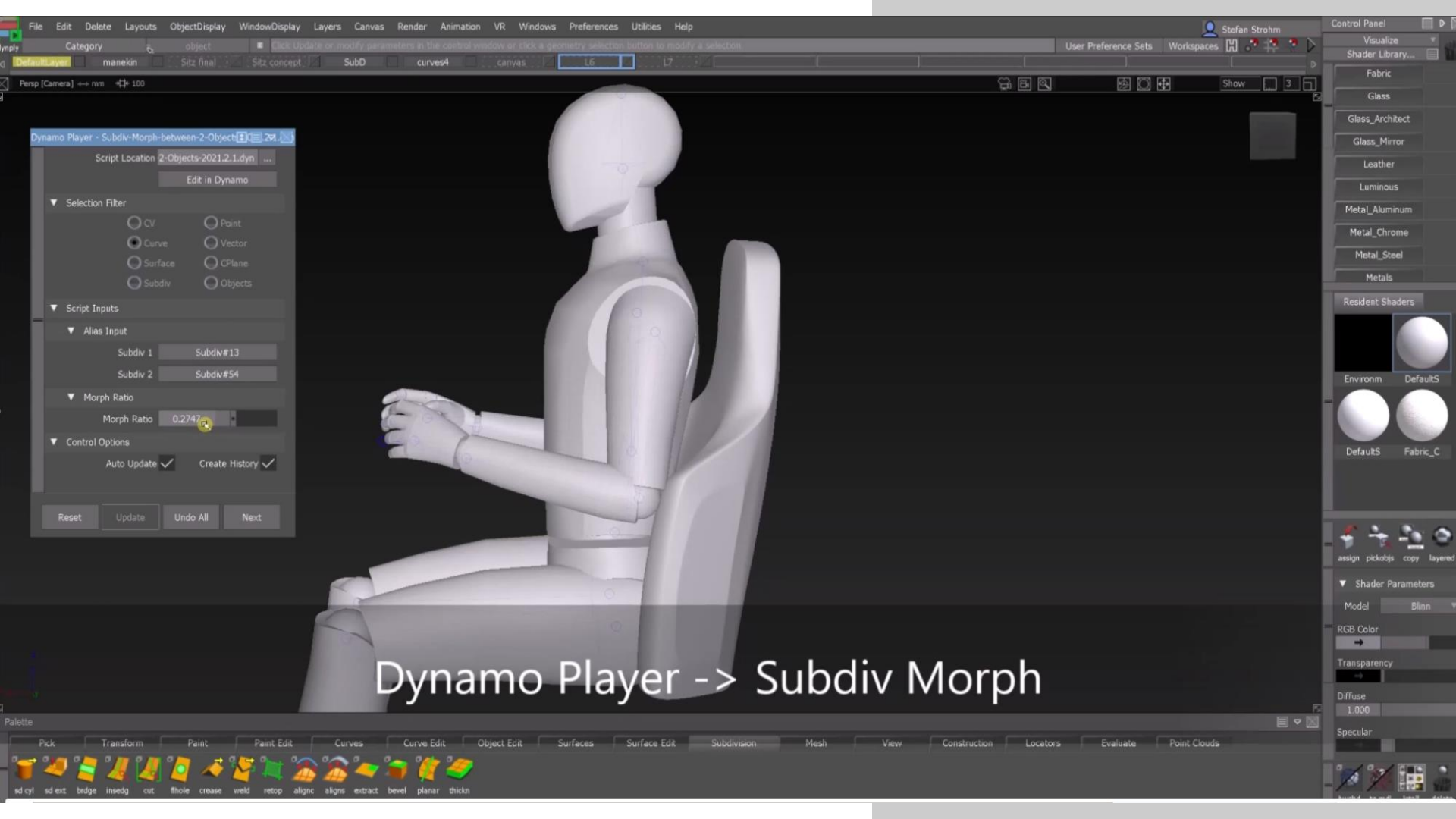

File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
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File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
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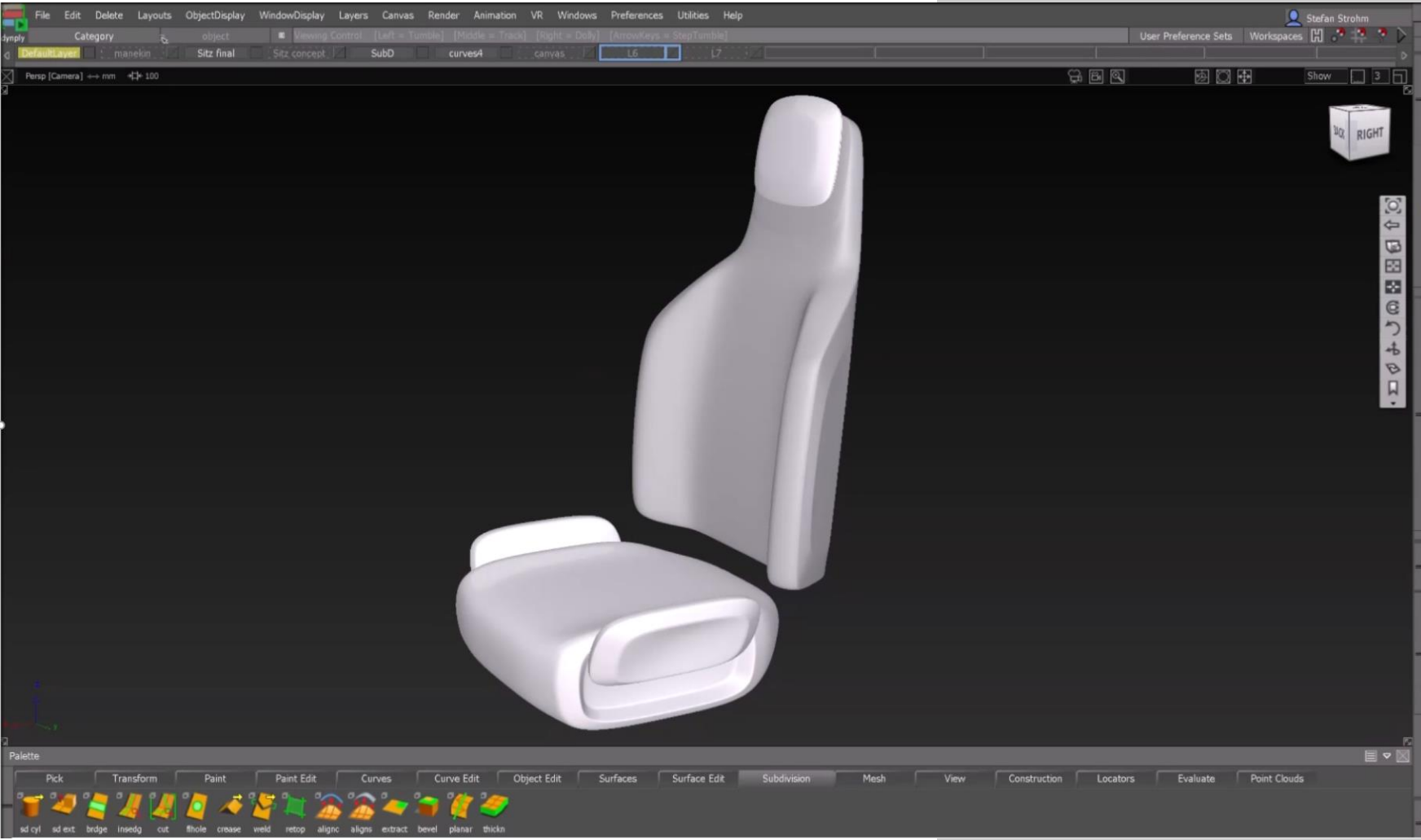

File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
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Stefan Strohm
Category
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Pick at least 2 edges to planarize, choose plane and projection type.
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Dynamo Player -> Subdiv Morph


Dynamo Player - Subdiv-Morph-between-2-Objects
Script Location
2-Objects-2021.2.1.dyn
Edit in Dynamo
Selection Filter
CV
Point
Curve
Vector
Surface
CPlane
Subdiv
Objects
Script Inputs
Alias Input
Subdiv 1
Subdiv#13
Subdiv 2
Subdiv#54
Morph Ratio
Morph Ratio
0.2747
Control Options
Auto Update
Create History
Reset
Update
Undo All
Next
Dynamo Player -> Subdiv Morph


File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
Stefan Strohm
Control Panel
Visualize
Shader Library...
Fabric
Glass
Glass_Architect
Glass_Mirror
Leather
Luminous
Metal_Aluminum
Metal_Chrome
Metal_Steel
Metals
Resident Shaders
Environm
DefaultS
DefaultS
Fabric_C
assign
pickobjs
copy
layered
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Model
Blinn
RGB Color
Transparency
Diffuse
1.000
Specular
Dynamo Player - Subdiv-Morph-between-2-Objects
Script Location
2-Objects-2021.2.1.dyn
Edit in Dynamo
Selection Filter
CV
Point
Curve
Vector
Surface
CPlane
Subdiv
Objects
Script Inputs
Alias Input
Subdiv 1
Subdiv#13
Subdiv 2
Subdiv#54
Morph Ratio
Morph Ratio
1.0000
Control Options
Auto Update
Create History
Reset
Update
Undo All
Next
Palette
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Subdivision
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View
Construction
Locators
Evaluate
Point Clouds
sd cyl
sd ext
bridge
insedg
cut
fihole
crease
weld
retop
alignc
aligns
extract
bevel
planar
thickn

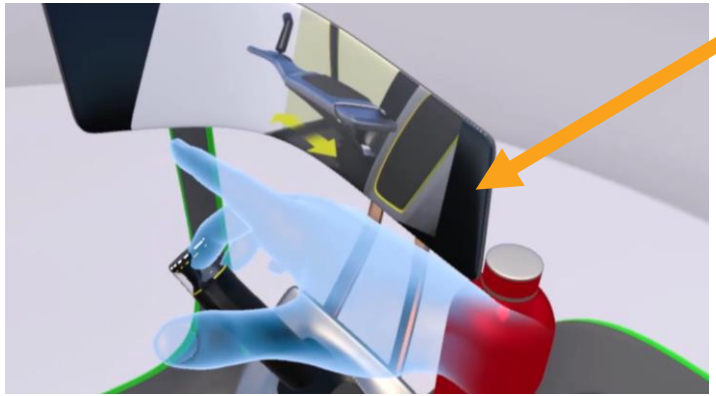

File Edit Delete Layouts ObjectDisplay WindowDisplay Layers Canvas Render Animation VR Windows Preferences Utilities Help
Stefan Strohm
Category
object
Viewing Control [Left = Tumble] [Middle = Track] [Right = Dolly] [ArrowKeys = StepTumble]
User Preference Sets
Workspaces
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Sitz final
Sitz concept
SubD
curves4
canvas
L6
L7
Persp [Camera]
Show
RIGHT
Control Panel
Visualize
Shader Library...
Fabric
Glass
Glass_Architect
Glass_Mirror
Leather
Luminous
Metal_Aluminum
Metal_Chrome
Metal_Steel
Metals
Resident Shaders
Environm
DefaultS
DefaultS
Fabric_C
assign
pickobjs
copy
layered
Shader Parameters
Model
Blinn
RGB Color
Transparency
Diffuse
1.000
Specular
Palette
Pick
Transform
Paint
Paint Edit
Curves
Curve Edit
Object Edit
Surfaces
Surface Edit
Subdivision
Mesh
View
Construction
Locators
Evaluate
Point Clouds
sd cyl
sd ext
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crease
weld
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aligns
extract
bevel
planar
thickn

Introduction to VR Collaboration

Point of Views



Live CAM

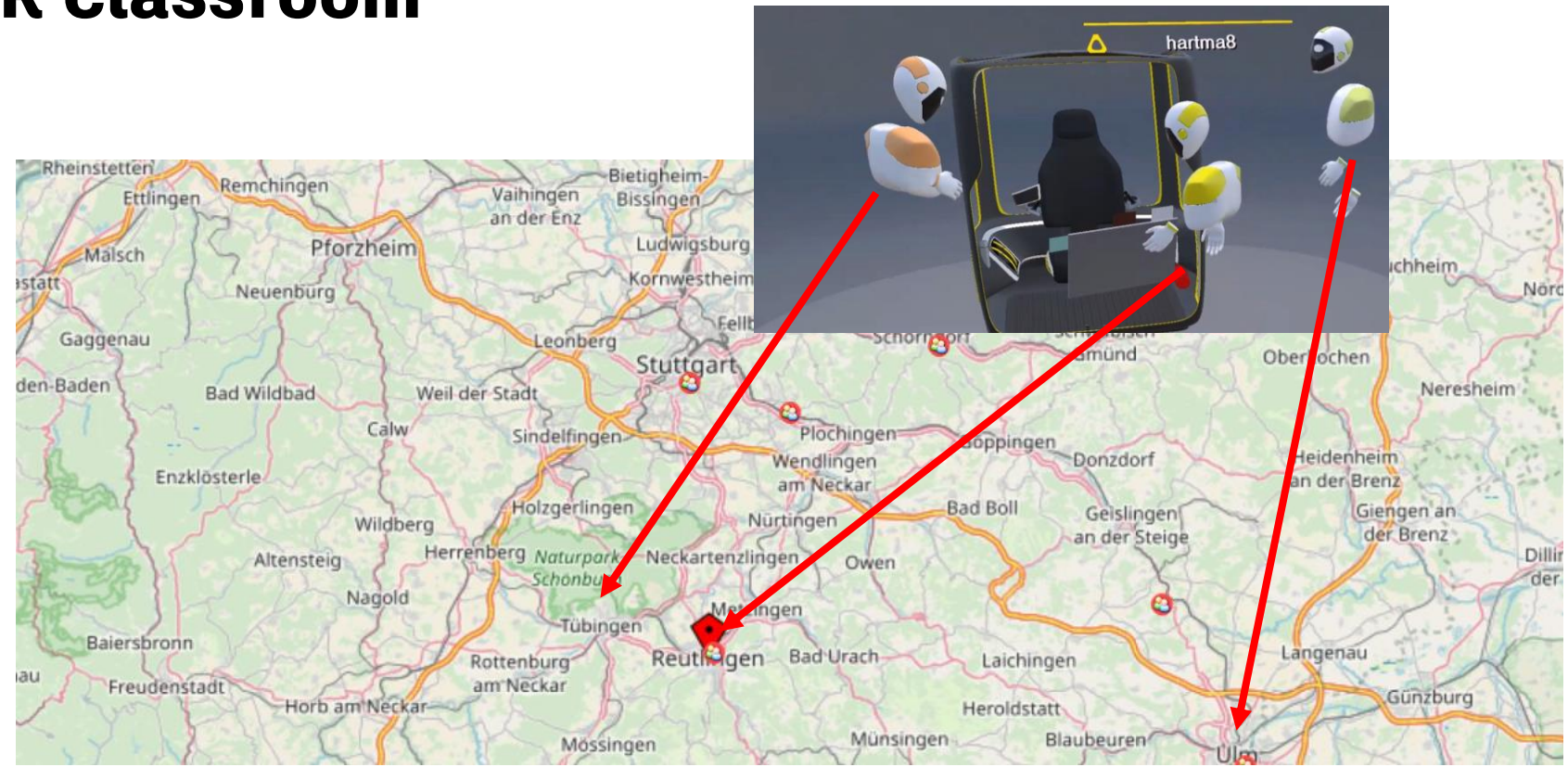


HMD View



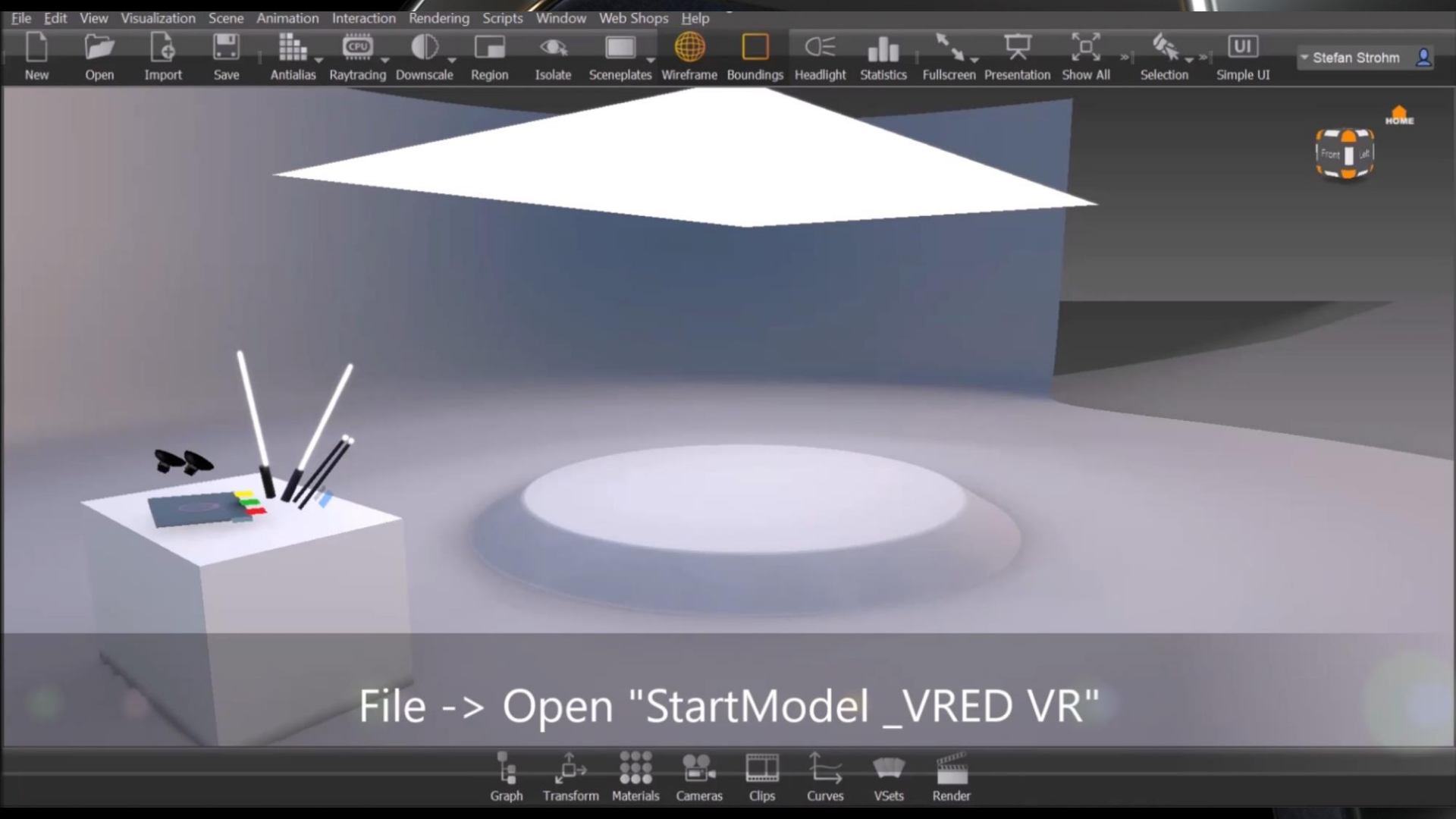
VRED View on Screen

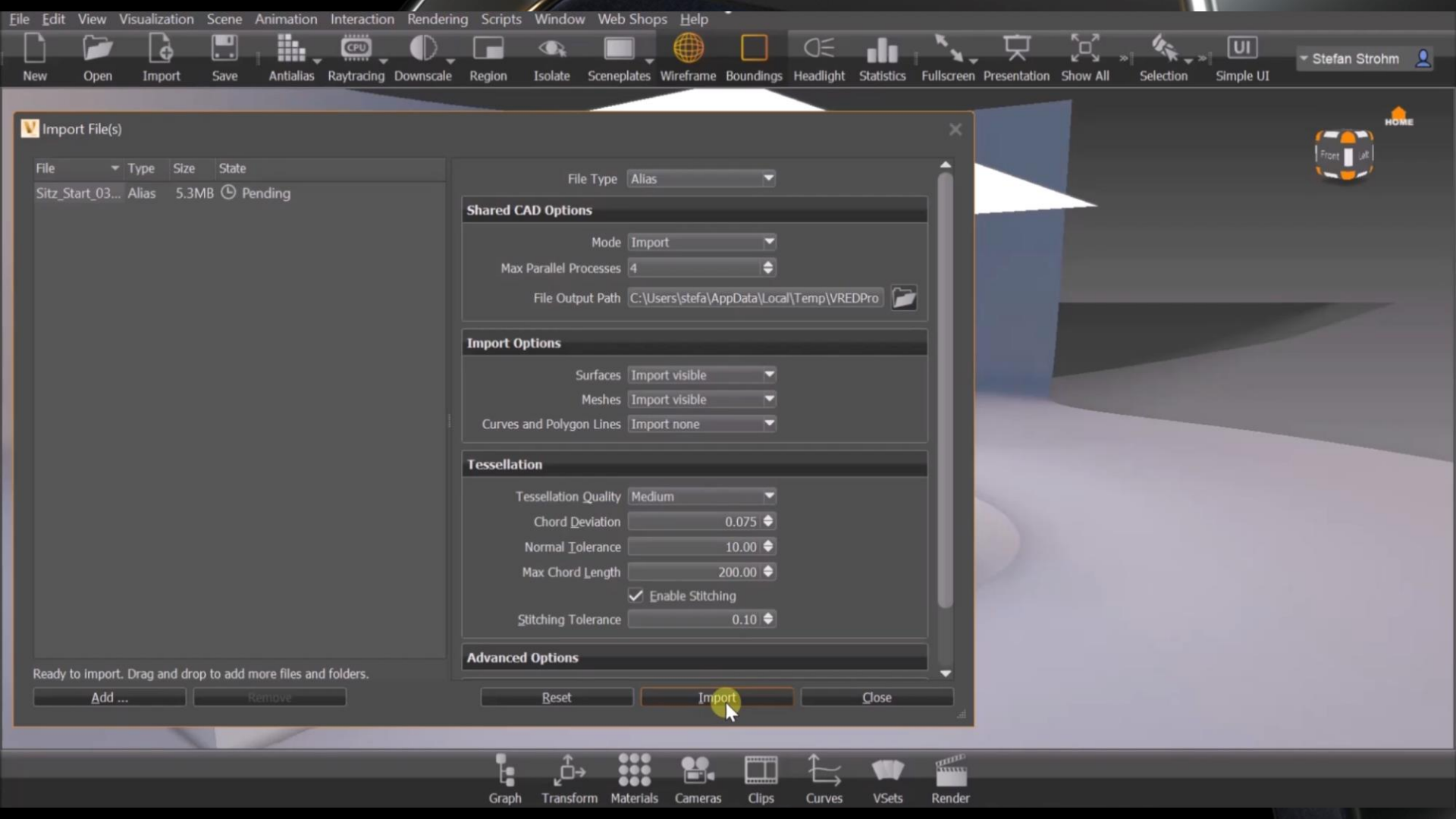
VR Classroom

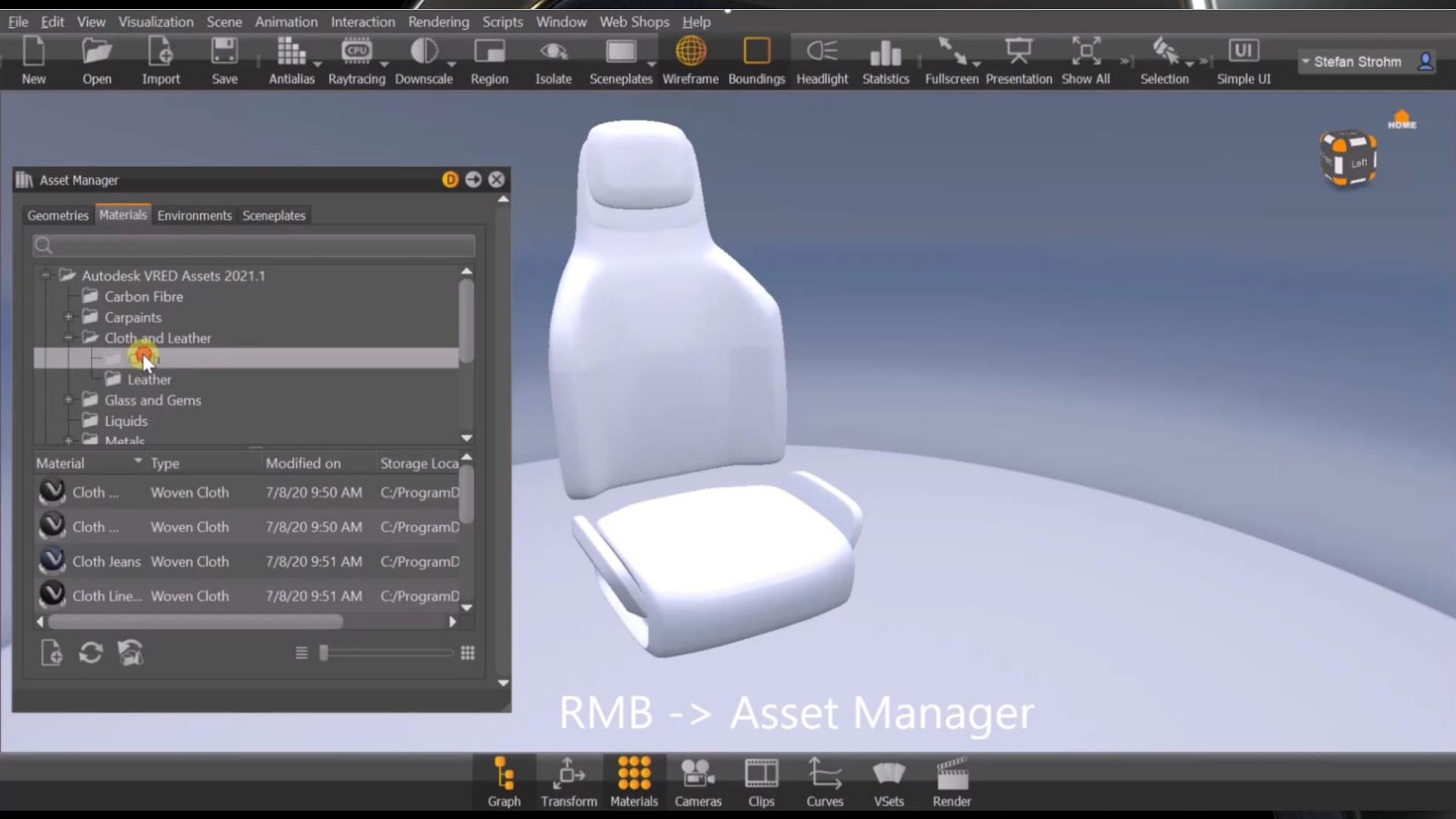


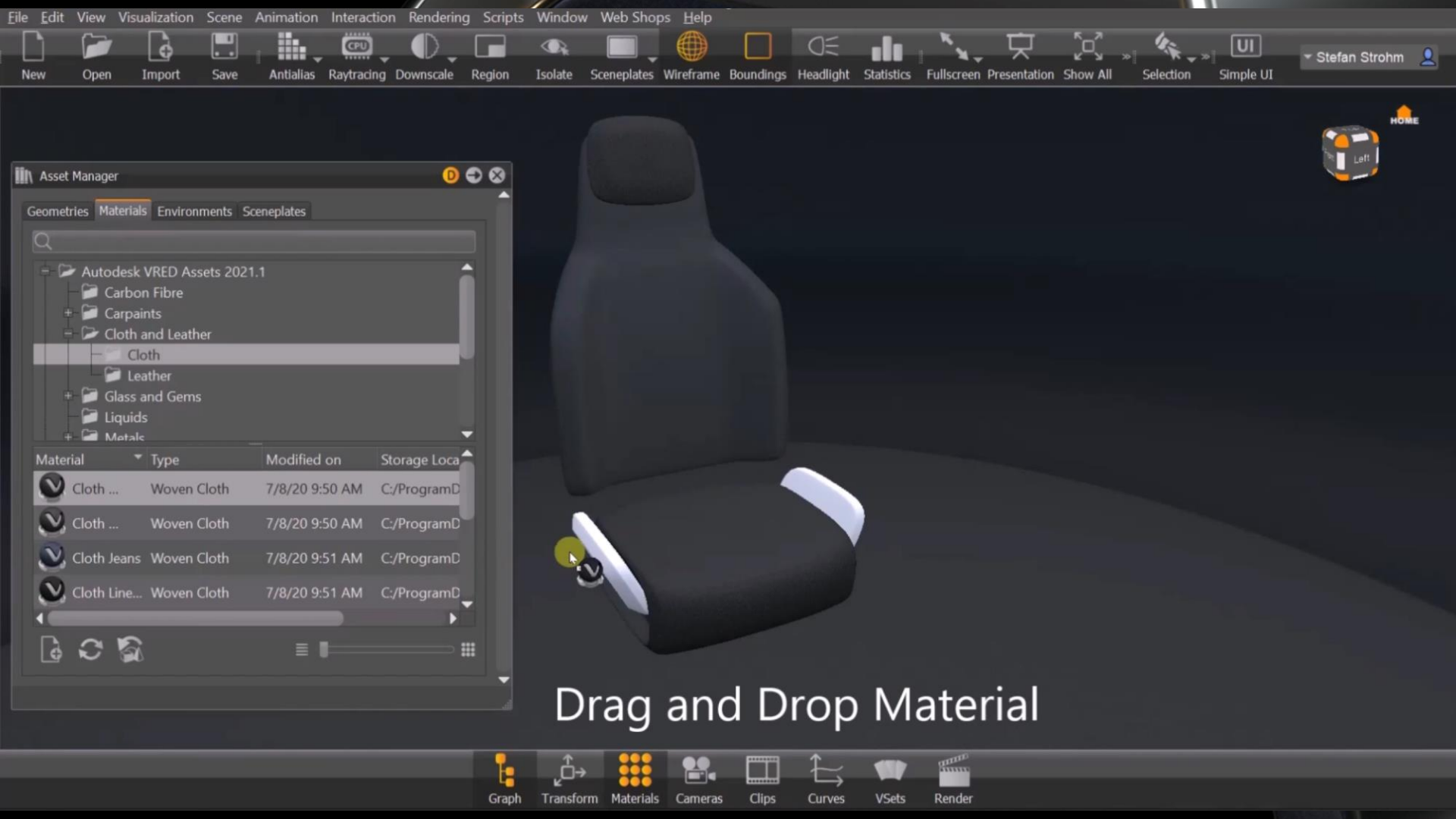
Setup Scene in VRED VR

Step by Step


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New
Open
Import
Save
Antialias
Raytracing
Downscale
Region
Isolate
Sceneplates
Wireframe
Boundings
Headlight
Statistics
Fullscreen
Presentation
Show All
Selection
Simple UI
Stefan Strohm
HOME
Front
Left
File -> Open "StartModel _VRED VR"
Graph
Transform
Materials
Cameras
Clips
Curves
VSets
Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Import File(s)
File Type Alias
Shared CAD Options
Mode Import
Max Parallel Processes 4
File Output Path C:\Users\stefa\AppData\Local\Temp\VREDPro
Import Options
Surfaces Import visible
Meshes Import visible
Curves and Polygon Lines Import none
Tessellation
Tessellation Quality Medium
Chord Deviation 0.075
Normal Tolerance 10.00
Max Chord Length 200.00
Enable Stitching
Stitching Tolerance 0.10
Advanced Options
File Type Size State
Sitz_Start_03... Alias 5.3MB Pending
Ready to import. Drag and drop to add more files and folders.
Add ...
Remove
Reset
Import
Close
HOME
Front
Graph Transform Materials Cameras Clips Curves VSets Render

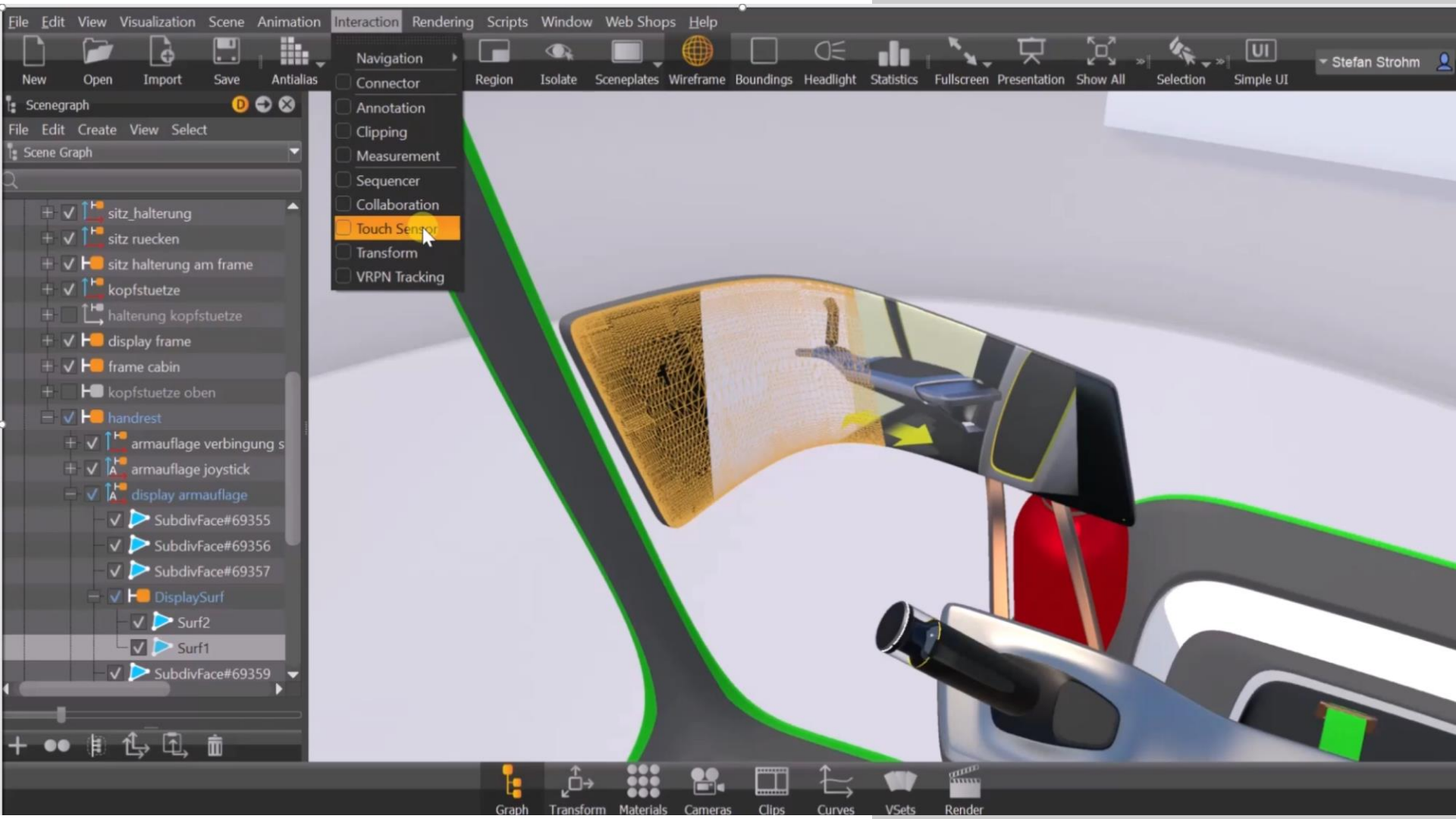

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Asset Manager
Geometries Materials Environments Sceneplates
Autodesk VRED Assets 2021.1
Carbon Fibre
Carpaints
Cloth and Leather
Leather
Glass and Gems
Liquids
Material Type Modified on Storage Loca
Cloth ... Woven Cloth 7/8/20 9:50 AM C:/ProgramD
Cloth ... Woven Cloth 7/8/20 9:50 AM C:/ProgramD
Cloth Jeans Woven Cloth 7/8/20 9:51 AM C:/ProgramD
Cloth Line... Woven Cloth 7/8/20 9:51 AM C:/ProgramD
HOME
Left
RMB -> Asset Manager
Graph Transform Materials Cameras Clips Curves VSets Render

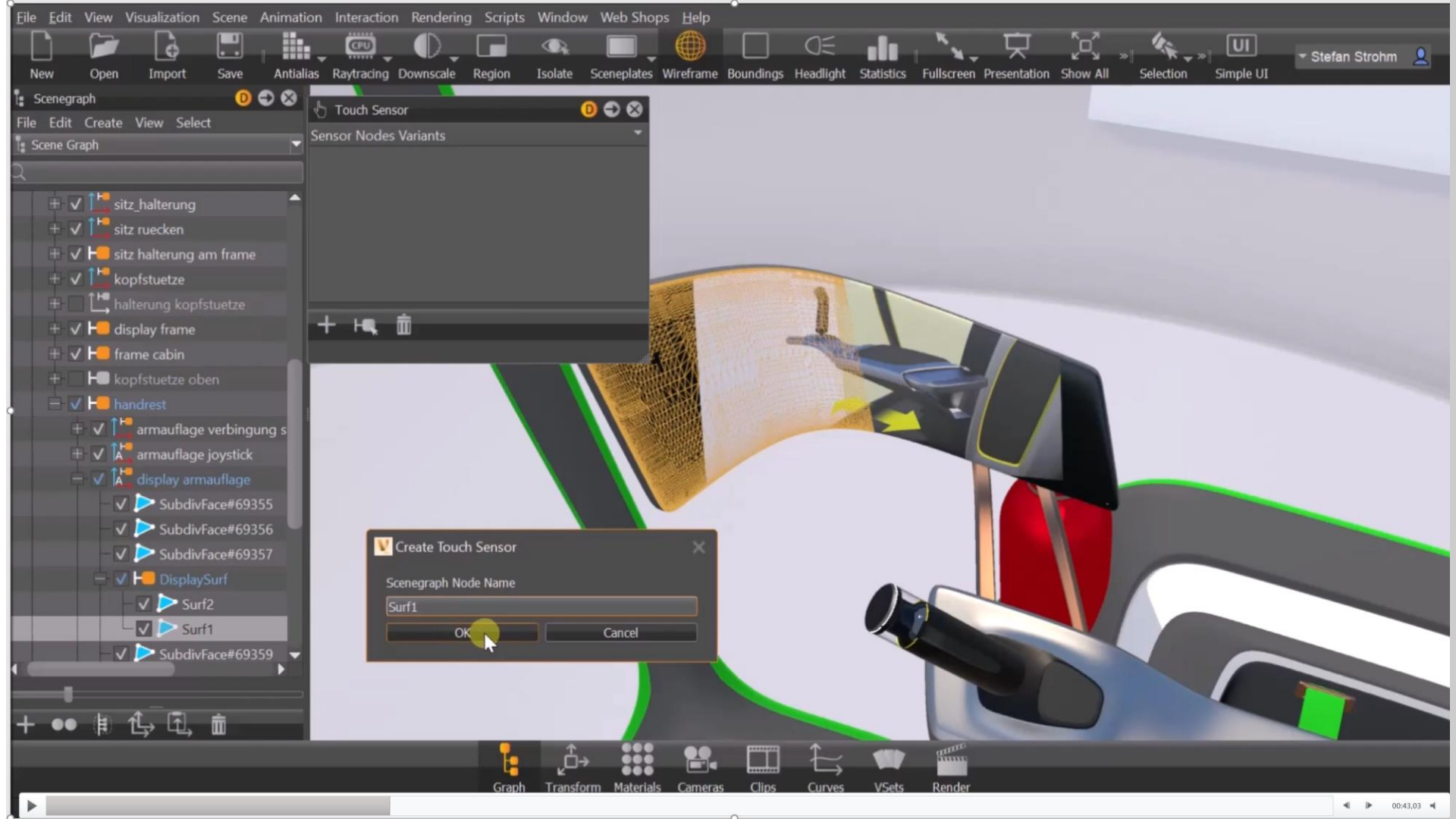

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Asset Manager
Geometries Materials Environments Sceneplates
Autodesk VRED Assets 2021.1
Carbon Fibre
Carpaints
Cloth and Leather
Cloth
Leather
Glass and Gems
Liquids
Material Type Modified on Storage Loca
Cloth ... Woven Cloth 7/8/20 9:50 AM C:/ProgramD
Cloth ... Woven Cloth 7/8/20 9:50 AM C:/ProgramD
Cloth Jeans Woven Cloth 7/8/20 9:51 AM C:/ProgramD
Cloth Line... Woven Cloth 7/8/20 9:51 AM C:/ProgramD
HOME
Left
Drag and Drop Material
Graph Transform Materials Cameras Clips Curves VSets Render

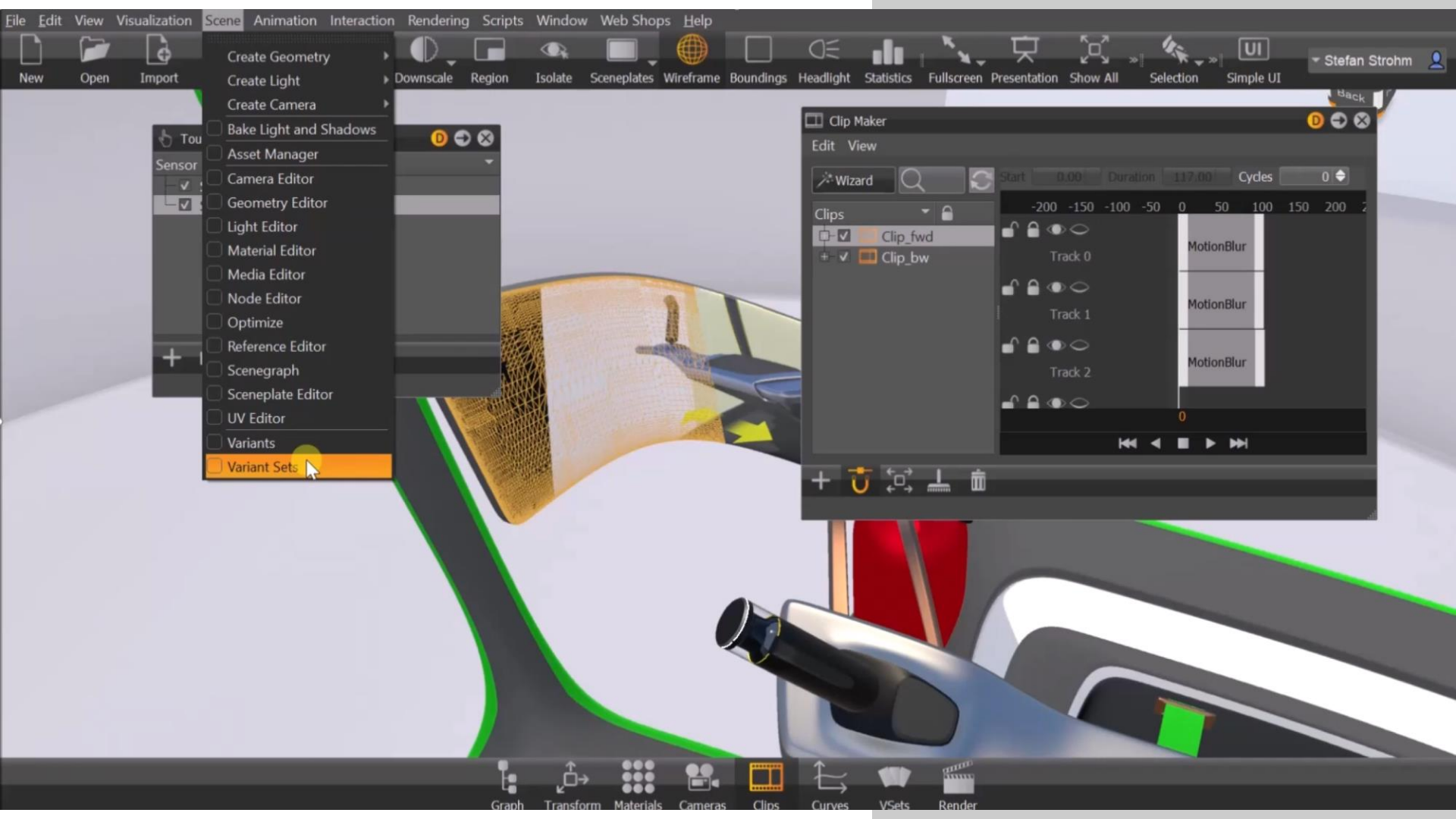

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
HOME
Graph Transform Materials Cameras Clips Curves VSets Render

Define a Touch Sensor

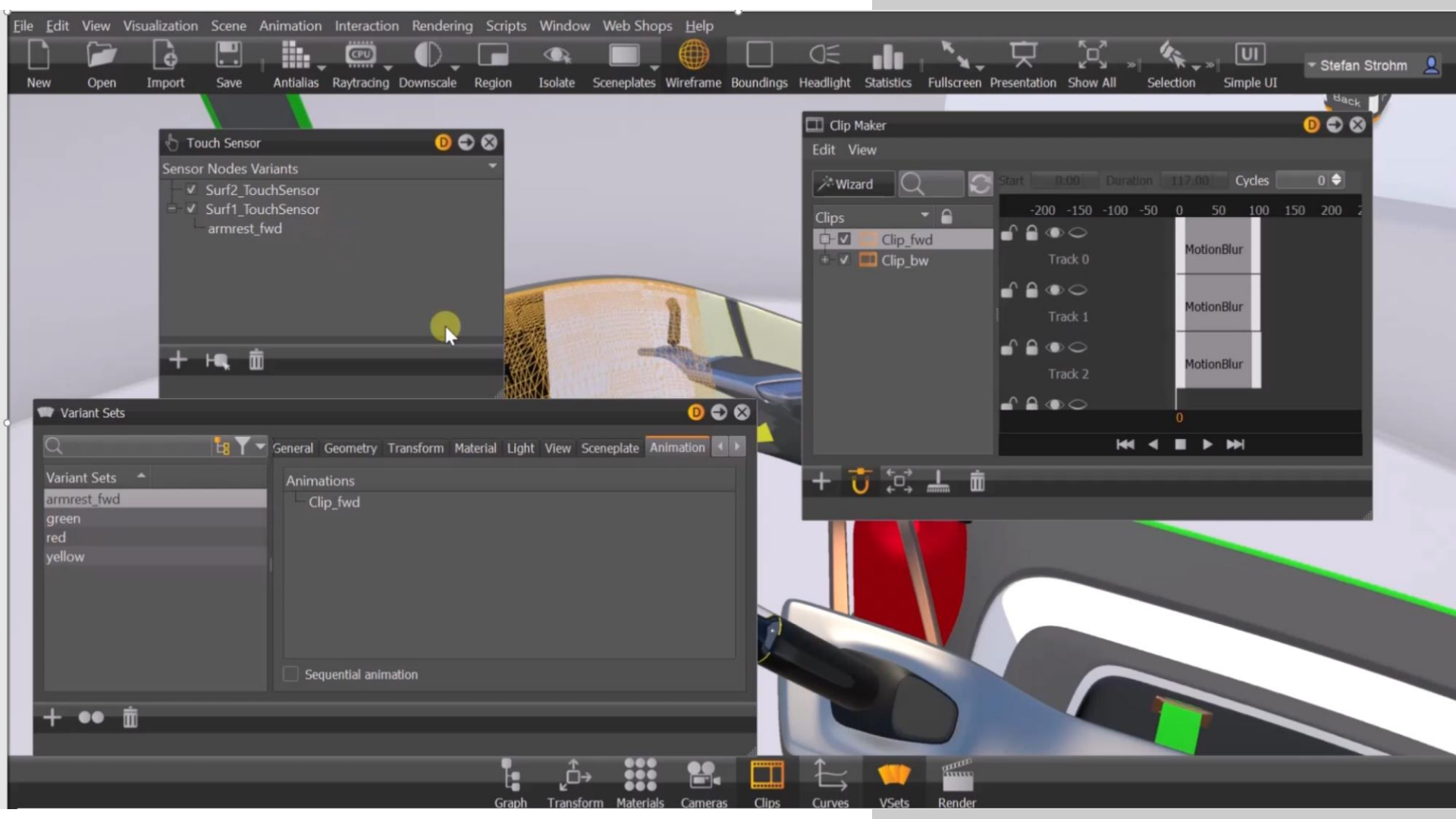
Step by Step

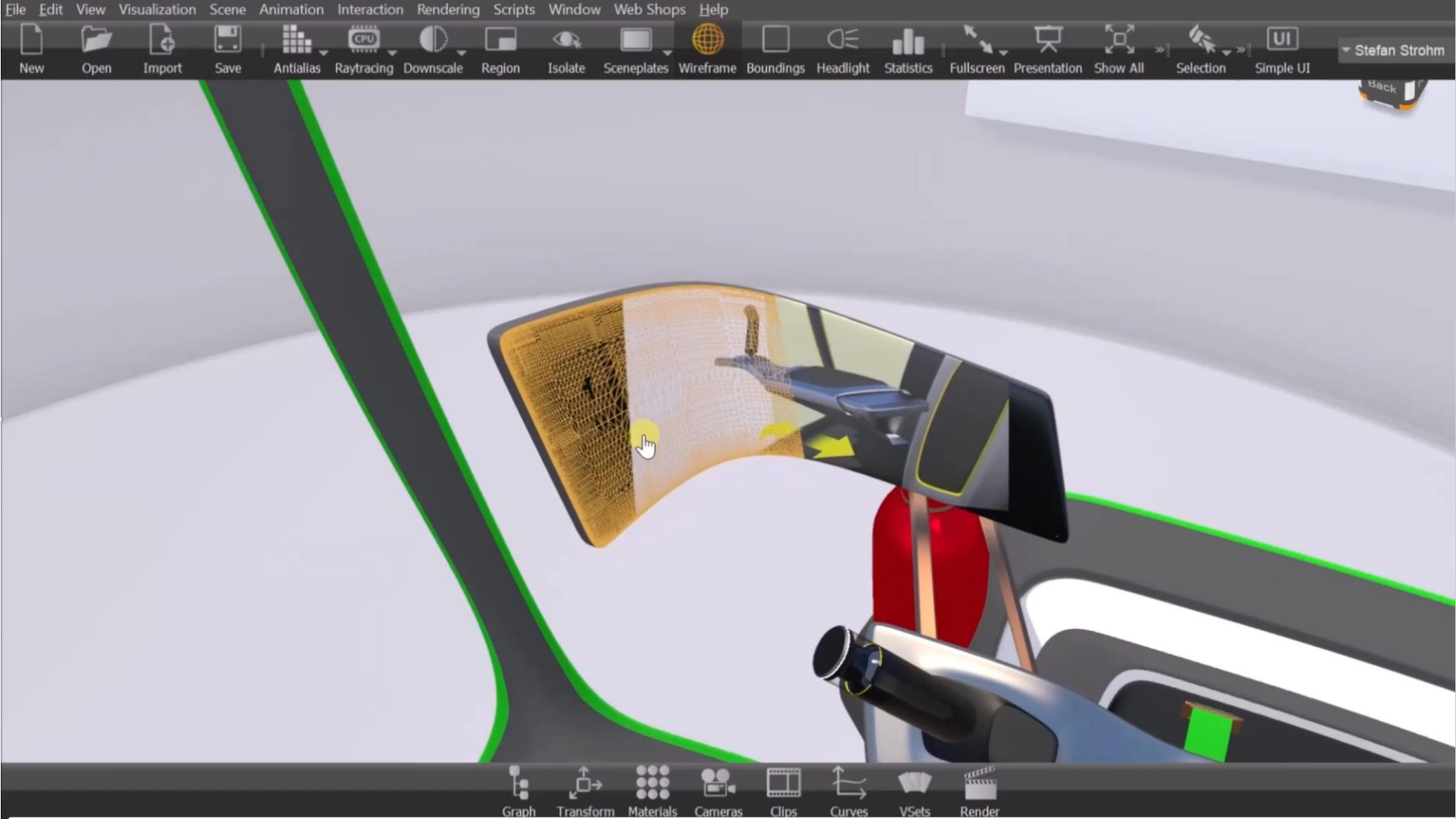

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias
Navigation
Connector
Annotation
Clipping
Measurement
Sequencer
Collaboration
Touch Sensor
Transform
VRPN Tracking
Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Scenegraph
File Edit Create View Select
Scene Graph
sitz_halterung
sitz ruecken
sitz halterung am frame
kopfstuetze
halterung kopfstuetze
display frame
frame cabin
kopfstuetze oben
handrest
armauflage verbingung s
armauflage joystick
display armauflage
SubdivFace#69355
SubdivFace#69356
SubdivFace#69357
DisplaySurf
Surf2
Surf1
SubdivFace#69359
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Scenegraph
File Edit Create View Select
Scene Graph
sitz_halterung
sitz ruecken
sitz halterung am frame
kopfstuetze
halterung kopfstuetze
display frame
frame cabin
kopfstuetze oben
handrest
armauflage verbingung s
armauflage joystick
display armauflage
SubdivFace#69355
SubdivFace#69356
SubdivFace#69357
DisplaySurf
Surf2
Surf1
SubdivFace#69359
Touch Sensor
Sensor Nodes Variants
Create Touch Sensor
Scenegraph Node Name
Surf1
OK
Cancel
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Create Geometry
Create Light
Create Camera
Bake Light and Shadows
Asset Manager
Camera Editor
Geometry Editor
Light Editor
Material Editor
Media Editor
Node Editor
Optimize
Reference Editor
Scenegraph
Sceneplate Editor
UV Editor
Variants
Variant Sets
Clip Maker
Edit View
Wizard
Start 0.00 Duration 117.00 Cycles 0
Clips
Clip_fwd
Clip_bw
-200 -150 -100 -50 0 50 100 150 200
Track 0
Track 1
Track 2
MotionBlur
MotionBlur
MotionBlur
0
Graph Transform Materials Cameras Clips Curves VSets Render

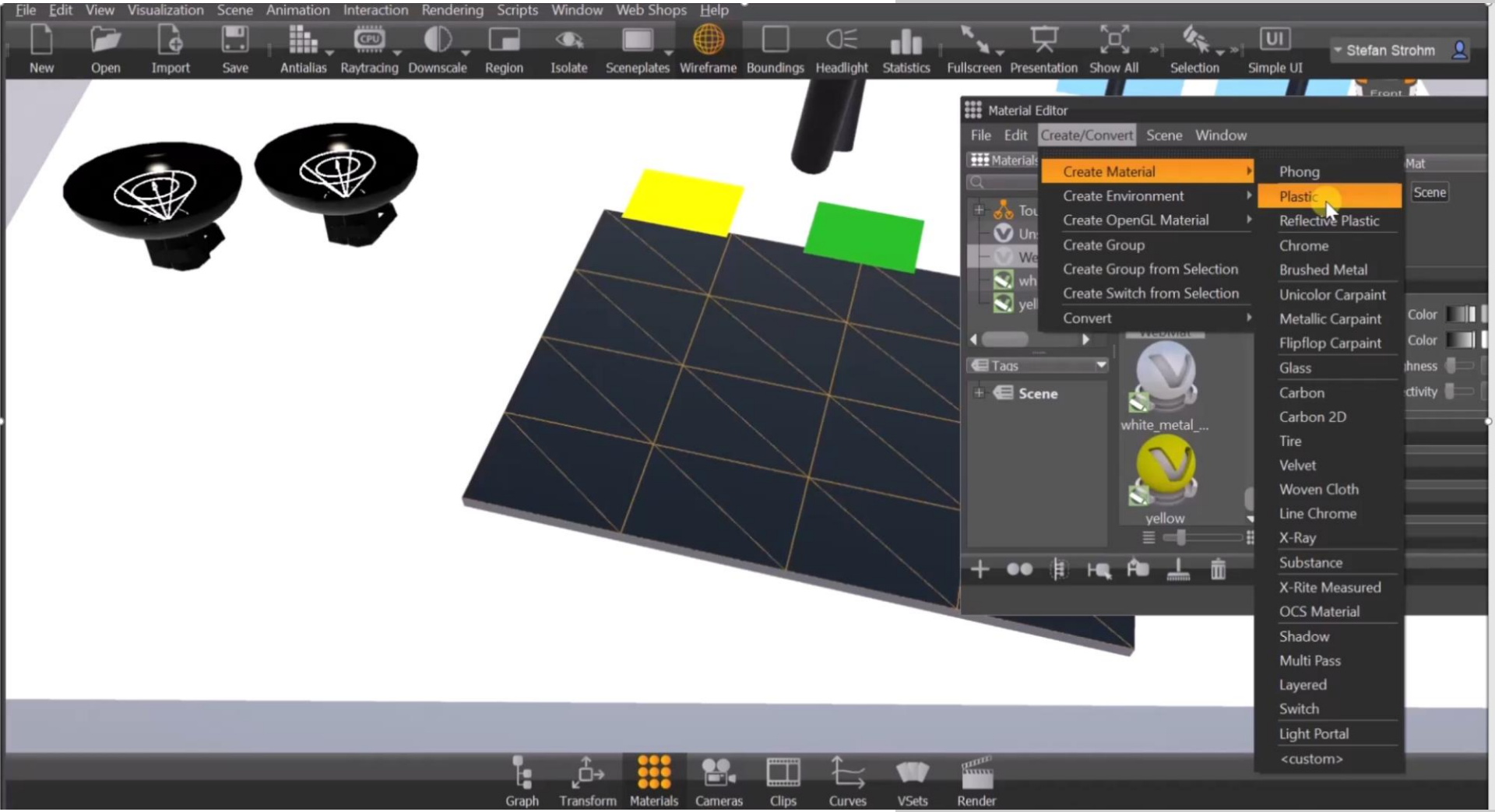

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Touch Sensor
Sensor Nodes Variants
Surf2_TouchSensor
Surf1_TouchSensor
Clip Maker
Edit View
Wizard
Start 0.00 Duration 117.00 Cycles 0
Clips
Clip_fwd
Clip_bw
-200 -150 -100 -50 0 50 100 150 200
Track 0
Track 1
Track 2
MotionBlur
MotionBlur
MotionBlur
0
Variant Sets
General Geometry Transform Material Light View Sceneplate Animation
Variant Sets
green
New Variant 1
red
yellow
Animations
Sequential animation
Creates a new variant
Graph Transform Materials Cameras Clips Curves VSets Render

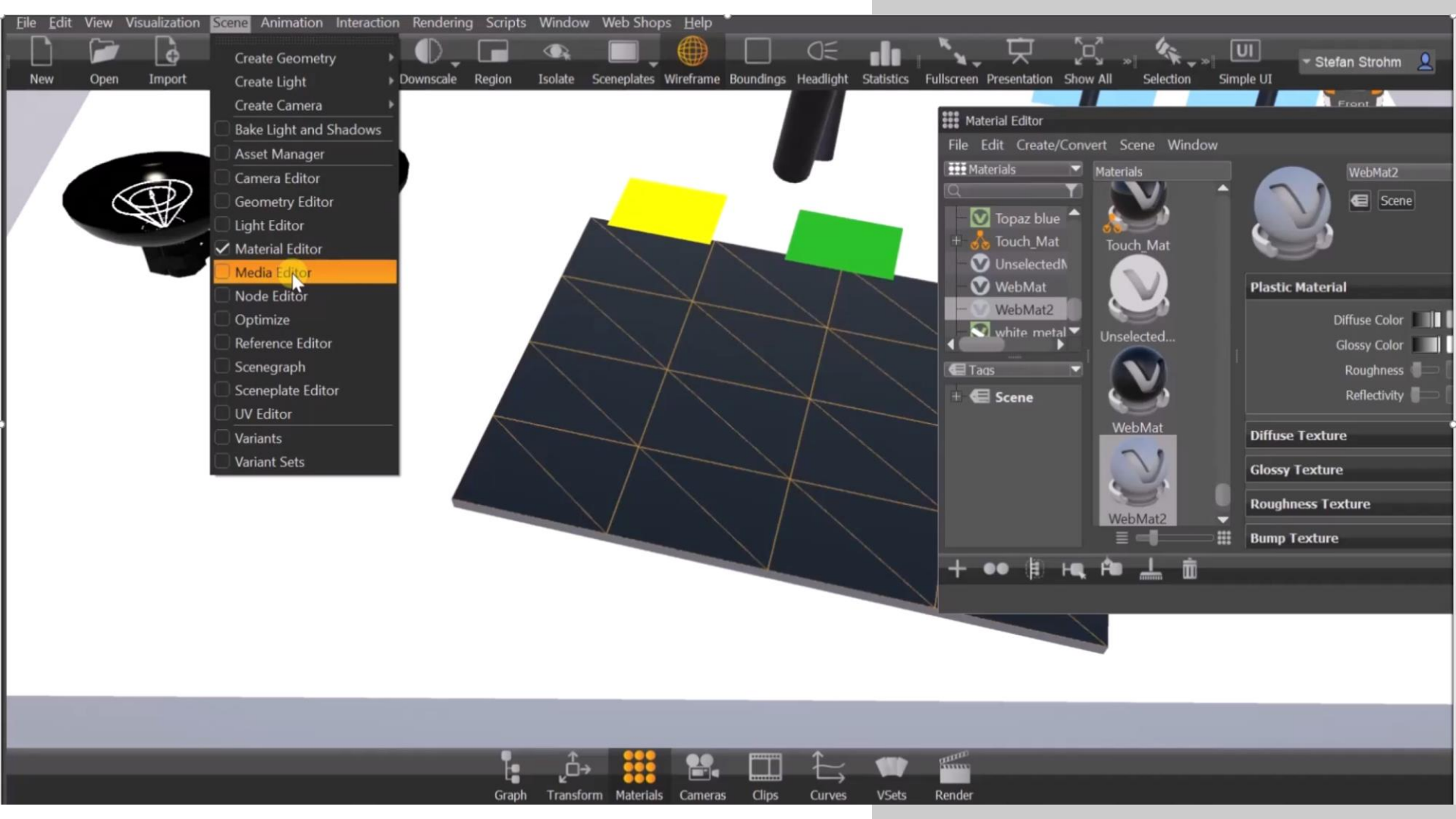

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Touch Sensor
Sensor Nodes Variants
Surf2_TouchSensor
Surf1_TouchSensor
armrest_fwd
Clip Maker
Edit View
Wizard
Start 0.00 Duration 117.00 Cycles 0
Clips
Clip_fwd
Clip_bw
-200 -150 -100 -50 0 50 100 150 200
Track 0
Track 1
Track 2
MotionBlur
MotionBlur
MotionBlur
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Variant Sets
General Geometry Transform Material Light View Sceneplate Animation
Variant Sets
armrest_fwd
green
red
yellow
Animations
Clip_fwd
Sequential animation
Graph Transform Materials Cameras Clips Curves VSets Render

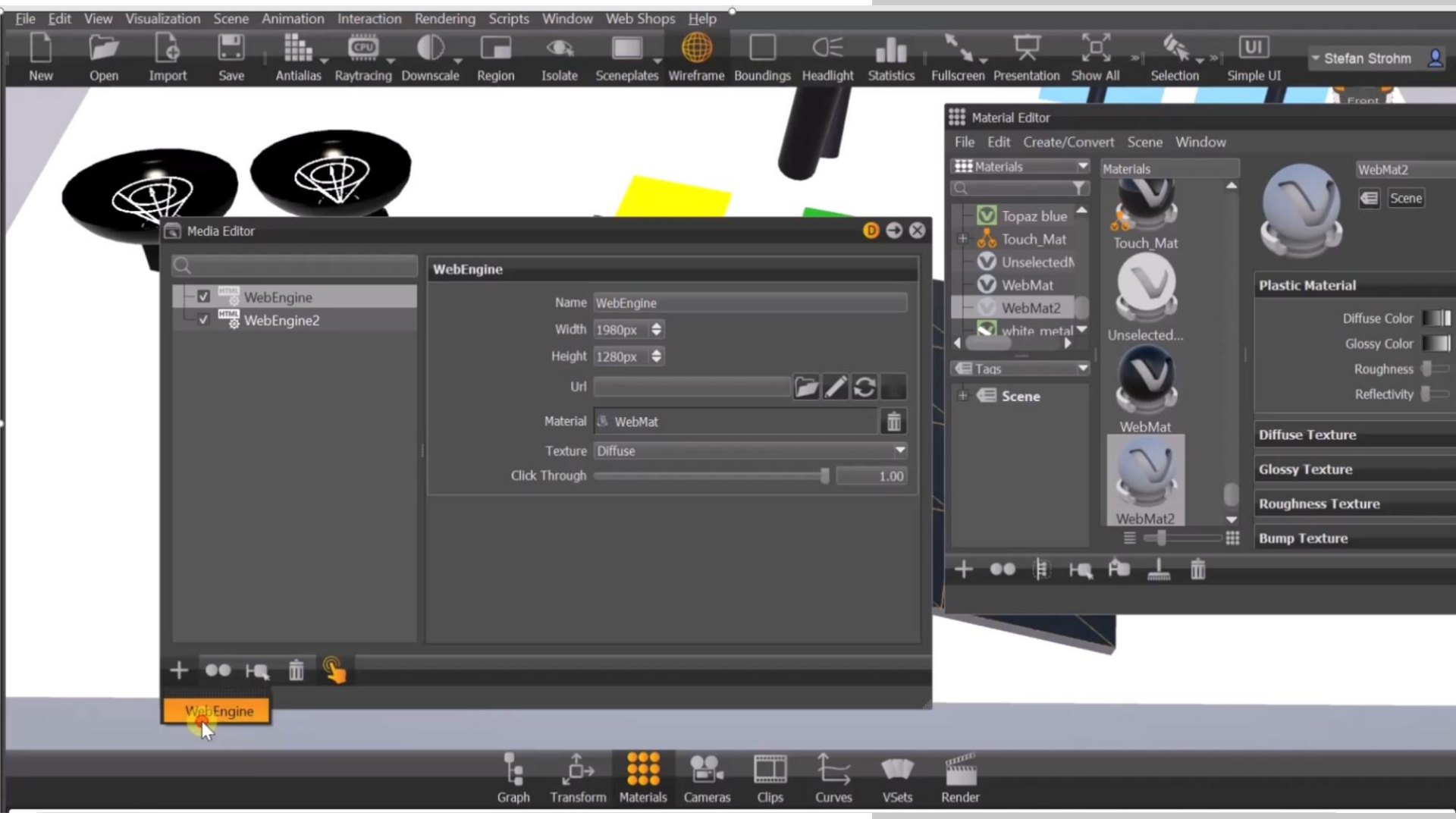

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Graph Transform Materials Cameras Clips Curves VSets Render

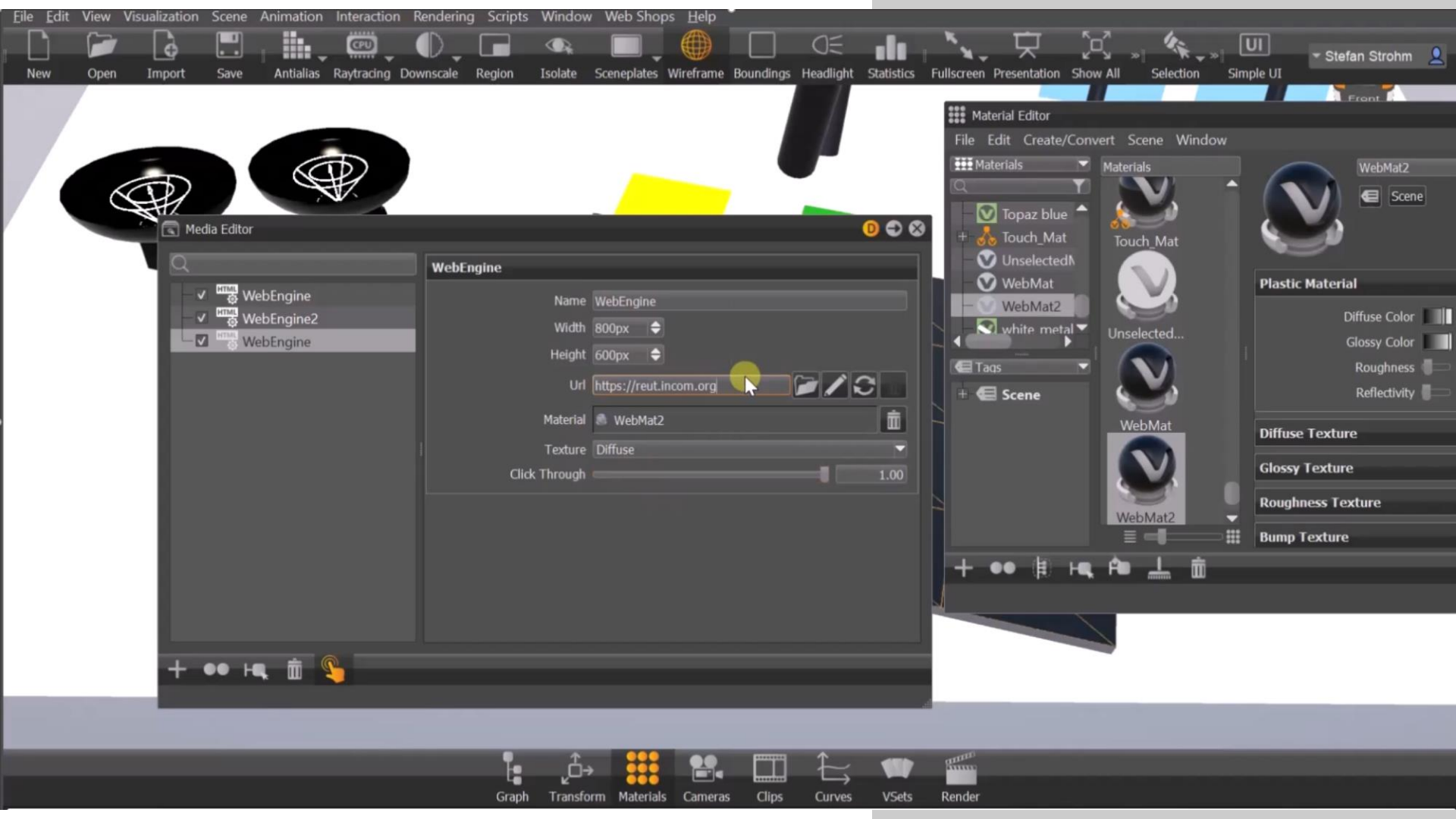
Define a WebEngine

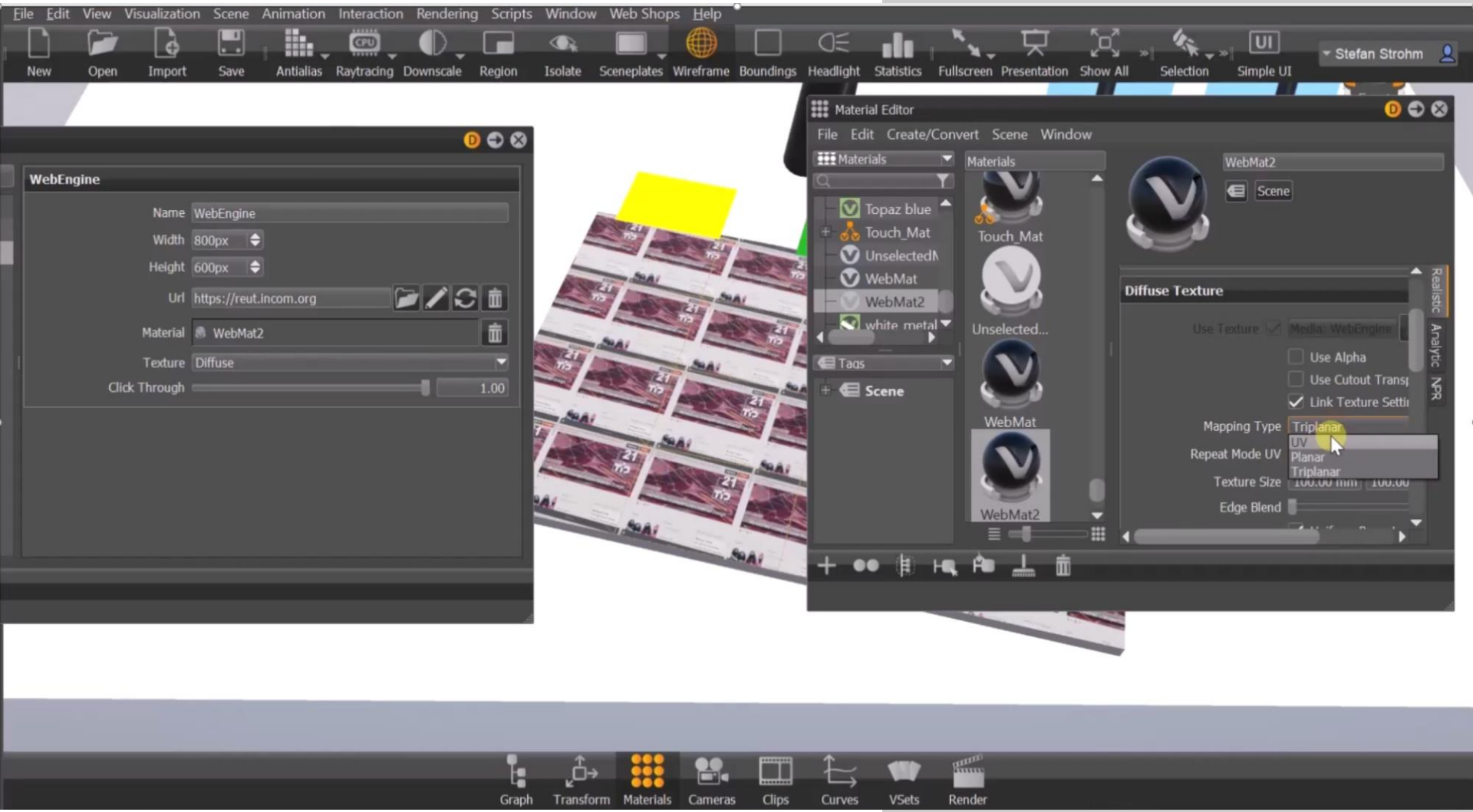
Step by Step


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Material Editor
File Edit Create/Convert Scene Window
Create Material
Create Environment
Create OpenGL Material
Create Group
Create Group from Selection
Create Switch from Selection
Convert
Phong
Plastic
Reflective Plastic
Chrome
Brushed Metal
Unicolor Carpaint
Metallic Carpaint
Flipflop Carpaint
Glass
Carbon
Carbon 2D
Tire
Velvet
Woven Cloth
Line Chrome
X-Ray
Substance
X-Rite Measured
OCS Material
Shadow
Multi Pass
Layered
Switch
Light Portal
<custom>
Tags
Scene
white_metal_...
yellow
Color
Color
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import
Create Geometry
Create Light
Create Camera
Bake Light and Shadows
Asset Manager
Camera Editor
Geometry Editor
Light Editor
Material Editor
Media Editor
Node Editor
Optimize
Reference Editor
Scenegraph
Sceneplate Editor
UV Editor
Variants
Variant Sets
Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Material Editor
File Edit Create/Convert Scene Window
Materials
Topaz blue
Touch_Mat
WebMat
WebMat2
Tags
Scene
Unselected...
Plastic Material
Diffuse Color
Glossy Color
Roughness
Reflectivity
Diffuse Texture
Glossy Texture
Roughness Texture
Bump Texture
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
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Media Editor
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WebEngine
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Height 1280px
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Material WebMat
Texture Diffuse
Click Through 1.00
WebEngine
Material Editor
File Edit Create/Convert Scene Window
Materials
Topaz blue
Touch_Mat
UnselectedM
WebMat
WebMat2
white_metal
Tags
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Materials
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WebMat
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WebMat2
Scene
Plastic Material
Diffuse Color
Glossy Color
Roughness
Reflectivity
Diffuse Texture
Glossy Texture
Roughness Texture
Bump Texture
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Media Editor
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WebEngine2
WebEngine
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Name WebEngine
Width 800px
Height 600px
Url https://reut.incom.org
Material WebMat2
Texture Diffuse
Click Through 1.00
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WebMat2
WebMat2
Scene
Plastic Material
Diffuse Color
Glossy Color
Roughness
Reflectivity
Diffuse Texture
Glossy Texture
Roughness Texture
Bump Texture
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
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Height 600px
Url https://reut.incom.org
Material WebMat2
Texture Diffuse
Click Through 1.00
Material Editor
File Edit Create/Convert Scene Window
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white_metal
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WebMat2
Scene
Diffuse Texture
Use Texture
Media: WebEngine
Use Alpha
Use Cutout Transp
Link Texture Setti
Mapping Type
Triplanar
UV
Planar
Triplanar
Repeat Mode UV
Texture Size
Edge Blend
Realistic
Analytic
NPR
Graph Transform Materials Cameras Clips Curves VSets Render

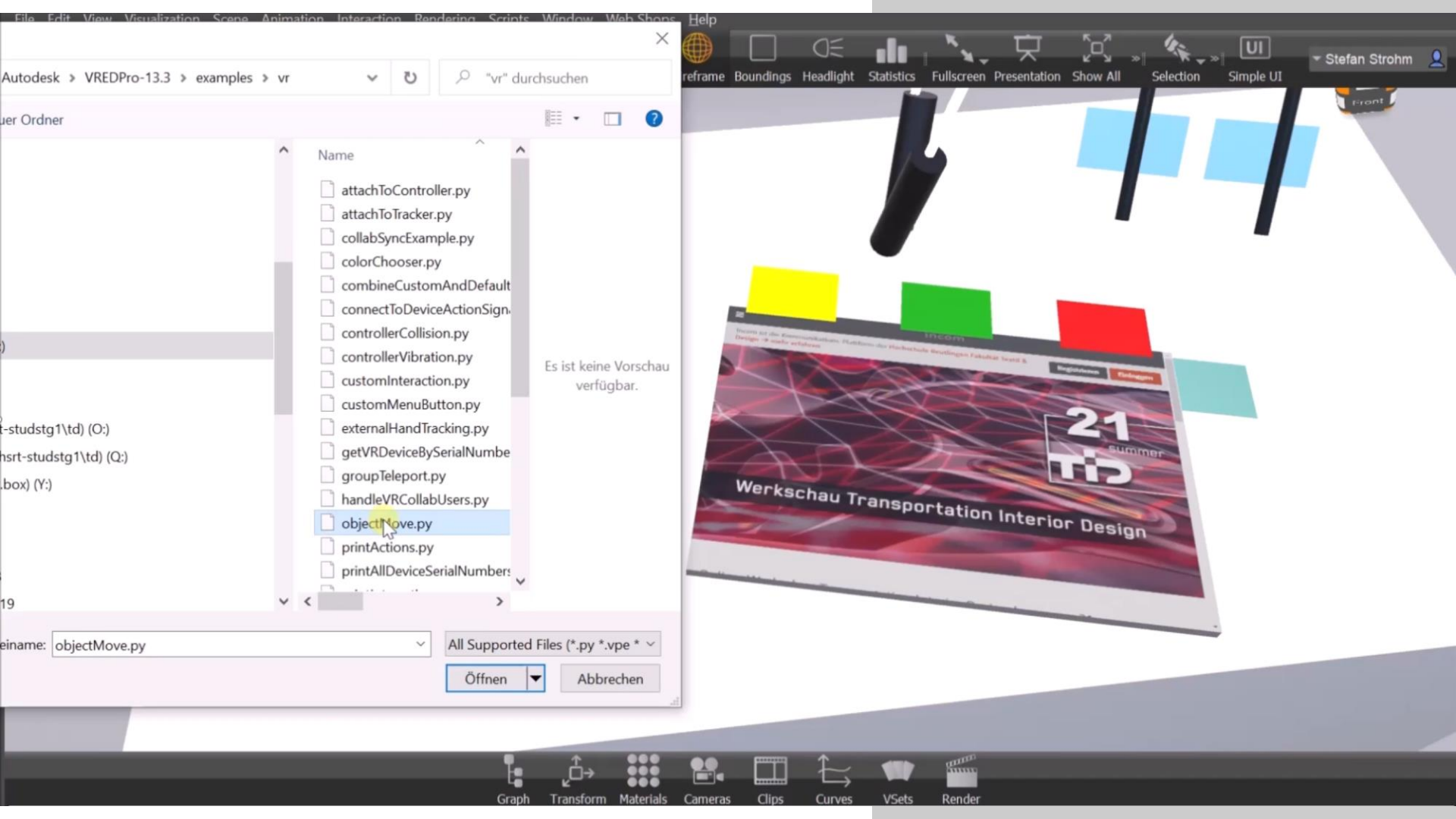

File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Material Editor
File Edit Create/Convert Scene Window
Materials
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Touch_Mat
UnselectedM
WebMat
WebMat2
white_metal
Tags
Scene
Materials
Touch_Mat
Unselected...
WebMat
WebMat2
WebMat2
Scene
Diffuse Texture
Use Texture
Media: WebEngine
Use Alpha
Use Cutout Transp
Link Texture Setti
Mapping Type
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Repeat Mode UV
Repeat
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Analytic NPR
Graph Transform Materials Cameras Clips Curves VSets Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Front
Online-Werkschau Transportation Interior Design Summer 21
21 summer
TID
Design
Projekte
Kalender
Zur Zeit keine Termine
Schwarzes Brett
Aktuelles aus den Workspaces
Workspace Stream
Noch gibt es keine Beiträge,
die auf der Startseite angezeigt
Graph Transform Materials Cameras Clips Curves VSets Render

Specify Movable Objects

Step by Step


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New
Open... Ctrl+O
Open Examples...
Open Recent
Save Ctrl+S
Save As... Ctrl+Shift+S
Save Selected... Ctrl+Alt+S
Save Package...
Publish...
Publish VRED Go...
Share View...
Import... Ctrl+Shift+O
Import Scene Data
Export...
Export Selected...
Export Scene Data
Export Snapshot Ctrl+P
Optimize Scene
Quit
Antialias
Raytracing
Downscale
Region
Isolate
Sceneplates
Wireframe
Boundings
Headlight
Statistics
Fullscreen
Presentation
Show All
Selection
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Stefan Strohm
21 summer
TID
Werkschau Transportation Interior Design
Graph
Transform
Materials
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Clips
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VSets
Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
reframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Autodesk › VREDPro-13.3 › examples › vr
"vr" durchsuchen
uer Ordner
Name
attachToController.py
attachToTracker.py
collabSyncExample.py
colorChooser.py
combineCustomAndDefault
connectToDeviceActionSign
controllerCollision.py
controllerVibration.py
customInteraction.py
customMenuButton.py
externalHandTracking.py
getVRDeviceBySerialNumbe
groupTeleport.py
handleVRCollabUsers.py
objectMove.py
printActions.py
printAllDeviceSerialNumbers
Es ist keine Vorschau verfügbar.
t-studstg1\td) (O:)
hsrt-studstg1\td) (Q:)
box) (Y:)
19
einame: objectMove.py
All Supported Files (*.py *.vpe *
Öffnen
Abbrechen
21 summer
TID
Werkschau Transportation Interior Design
Graph Transform Materials Cameras Clips Curves VSets Render

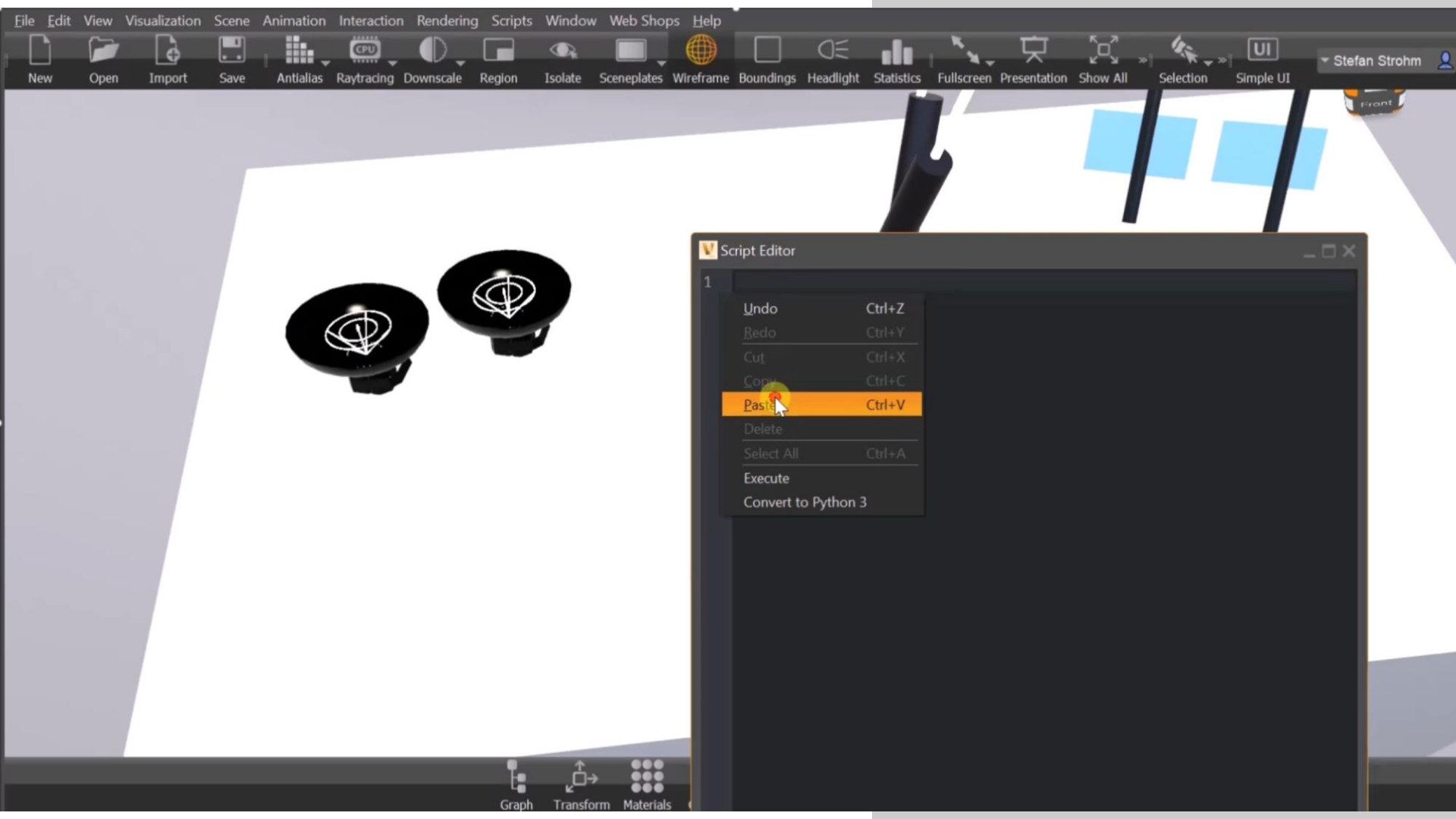
File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help

objectMove - Editor

Datei Bearbeiten Format Ansicht Hilfe

```
            vrConstraintService.deleteConstraint(self.constraint)
    def createMenu(self):
        icon = QtGui.QIcon()
        icon.addFile("objectMoveOn.png",QtCore.QSize(),QtGui.QIcon.Mode.Normal,QtGui.QIcon.State.On)
        icon.addFile("objectMoveOff.png",QtCore.QSize(),QtGui.QIcon.Mode.Normal,QtGui.QIcon.State.Off)
        self.tool = vrImmersiveUiService.createTool("CustomObjectMover")
        self.tool.setText("Move")
        self.tool.setCheckable(True)
        self.tool.setIcon(icon)
        self.tool.signal().checked.connect(self.enableMover)
        self.tool.signal().unchecked.connect(self.disableMover)
    def deleteMenu(self):
        vrImmersiveUiService.deleteTool(self.tool)
    def enableMover(self):
        if not self.moverEnabled:
            pointer = vrDeviceService.getInteraction("Pointer")
            start = pointer.getControllerAction("start")
            start.signal().triggered.connect(self.startMove)
            execute = pointer.getControllerAction("execute")
            execute.signal().triggered.connect(self.stopMove)
            self.moverEnabled = True
    def disableMover(self):
        if self.moverEnabled:
            pointer = vrDeviceService.getInteraction("Pointer")
            start = pointer.getControllerAction("start")
            start.signal().triggered.disconnect(self.startMove)
            execute = pointer.getControllerAction("execute")
            execute.signal().triggered.disconnect(self.stopMove)
            self.moverEnabled = False
    def getMovable(self,node):
        while not node.isNull():
            print((node.getName()))
            if node.getName().startswith("movable"):
                return node
            node = node.getParent()
        return node
```


File
Edit
View
Visualization
Scene
Animation
Interaction
Rendering
Scripts
Window
Web Shops
Help
Script Editor
Run Script
Reload Script Plugins
Undo Ctrl+Z
Redo Ctrl+Y
Undo View Change Alt+Z
Redo View Change Alt+Y
Clear Undo Stack
Selection
Preferences
Antialias
Raytracing
Downscale
Region
Isolate
Sceneplates
Wireframe
Boundings
Headlight
Statistics
Fullscreen
Presentation
Show All
Selection
Simple UI
Stefan Strohm
21
summer
Werkschau Transportation Interior Design
Graph
Transform
Materials
Cameras
Clips
Curves
VSets
Render


File Edit View Visualization Scene Animation Interaction Rendering Scripts Window Web Shops Help
New Open Import Save Antialias Raytracing Downscale Region Isolate Sceneplates Wireframe Boundings Headlight Statistics Fullscreen Presentation Show All Selection Simple UI
Stefan Strohm
Front
Script Editor
1
Undo Ctrl+Z
Redo Ctrl+Y
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete
Select All Ctrl+A
Execute
Convert to Python 3
Graph
Transform
Materials

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Stefan Strohm



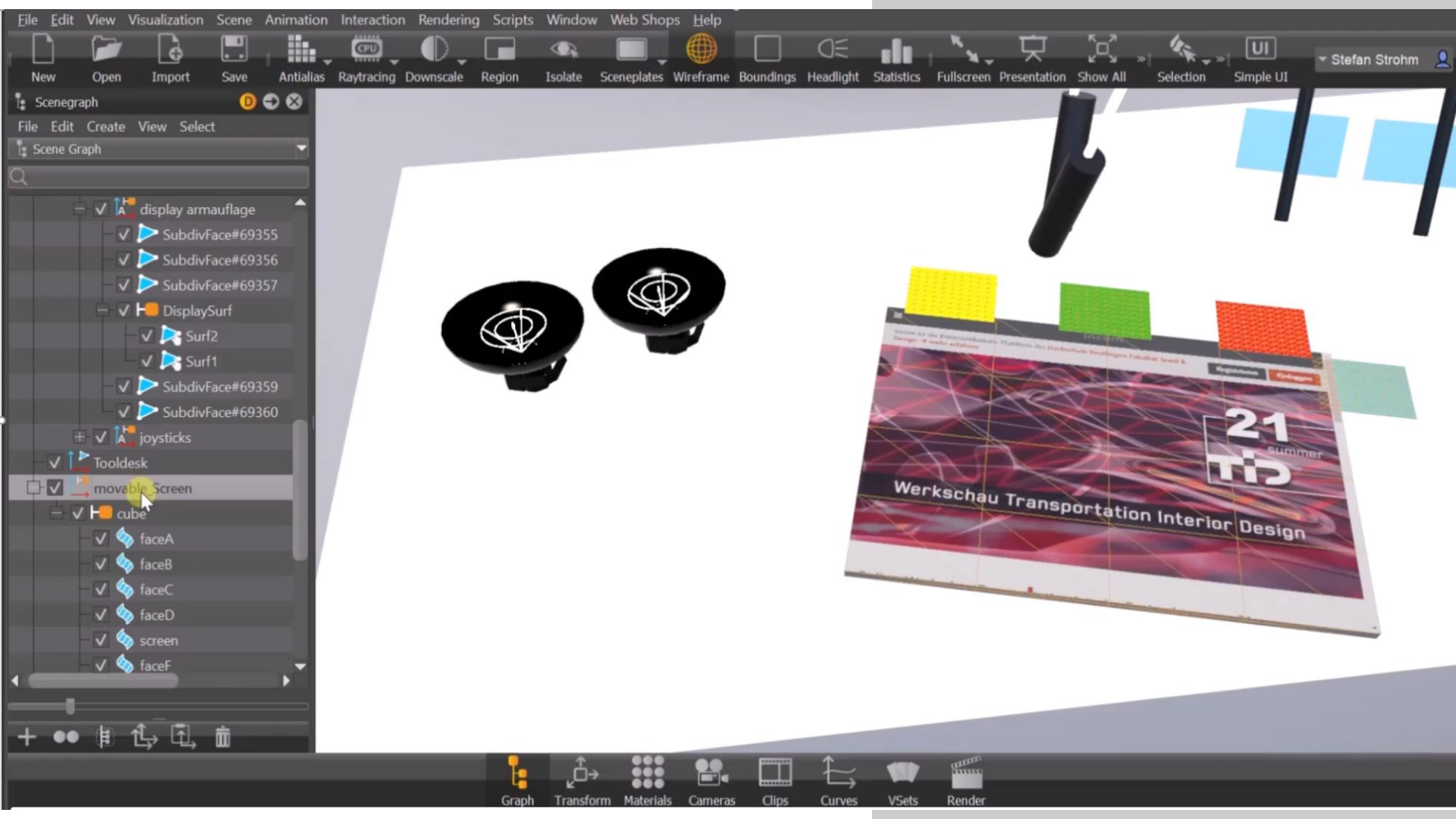
Script Editor

```
from PySide2 import QtCore, QtGui

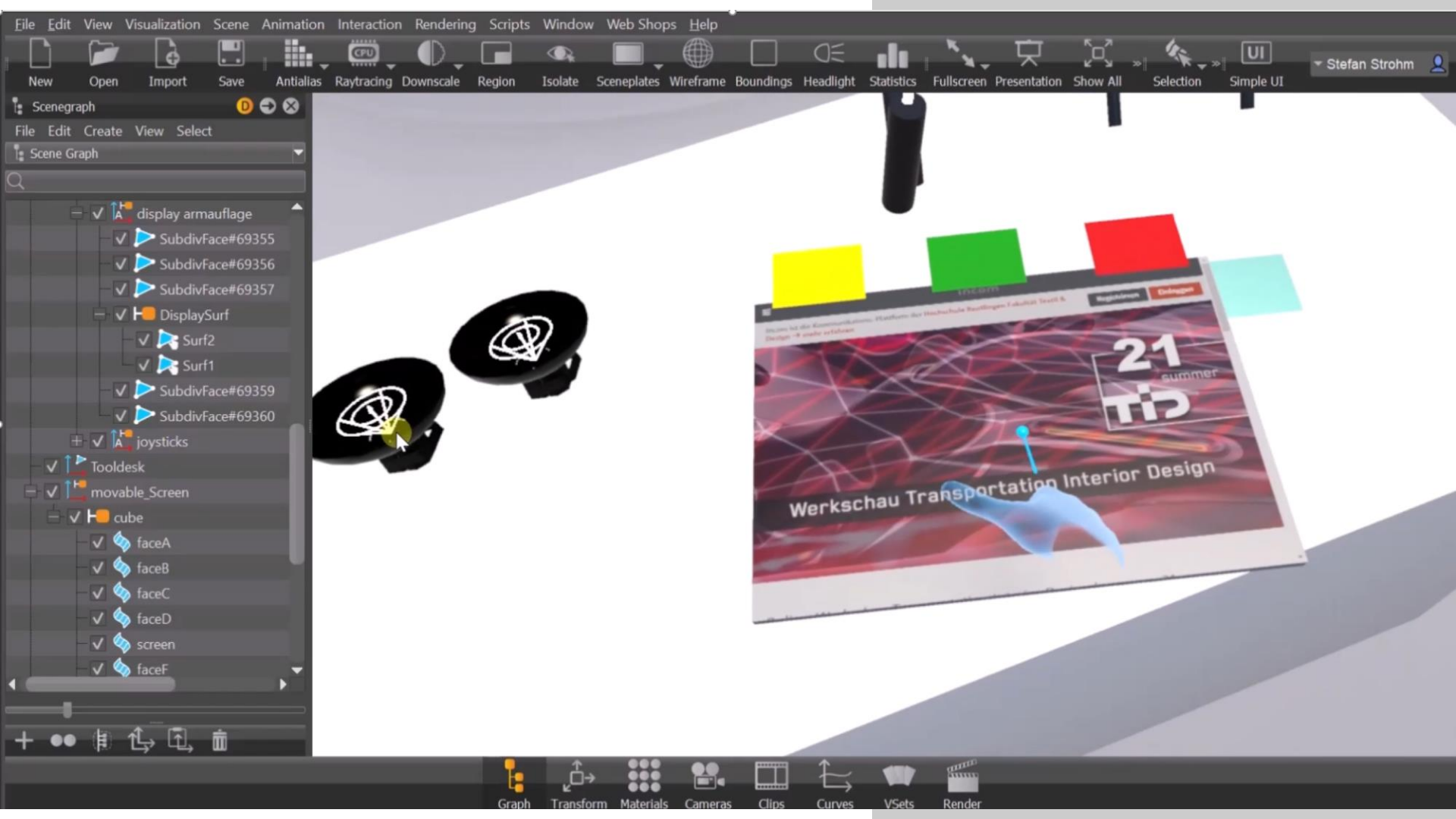
class ObjectMover():
    def __init__(self):
        self.moverEnabled = False
        self.createMenu()
        self.node = None
    def startMove(self,action,device):
        self.node = self.getMovable(device.pick().getNode())
        if not self.node.isNull():
            vrSessionService.addNodeSync(self.node)
            self.constraint = vrConstraintService.createParentCor
    def stopMove(self,action,device):
        if not self.node == None and not self.node.isNull():
            vrSessionService.removeNodeSync(self.node)
            vrConstraintService.deleteConstraint(self.constraint)
    def createMenu(self):
        icon = QtGui.QIcon()
        icon.addFile("objectMoveOn.png",QtCore.QSize(),QtGui.QIco
        icon.addFile("objectMoveOff.png",QtCore.QSize(),QtGui.QIc
        self.tool = vrImmersiveUiService.createTool("CustomObject
        self.tool.setText("Move")
        self.tool.setCheckable(True)
        self.tool.setIcon(icon)
        self.tool.signal().checked.connect(self.enableMover)
        self.tool.signal().unchecked.connect(self.disableMover)
    def deleteMenu(self):
        vrImmersiveUiService.deleteTool(self.tool)
    def enableMover(self):
        if not self.moverEnabled:
```

Run

Graph Transform Materials Cameras Clips Curves VSets Render

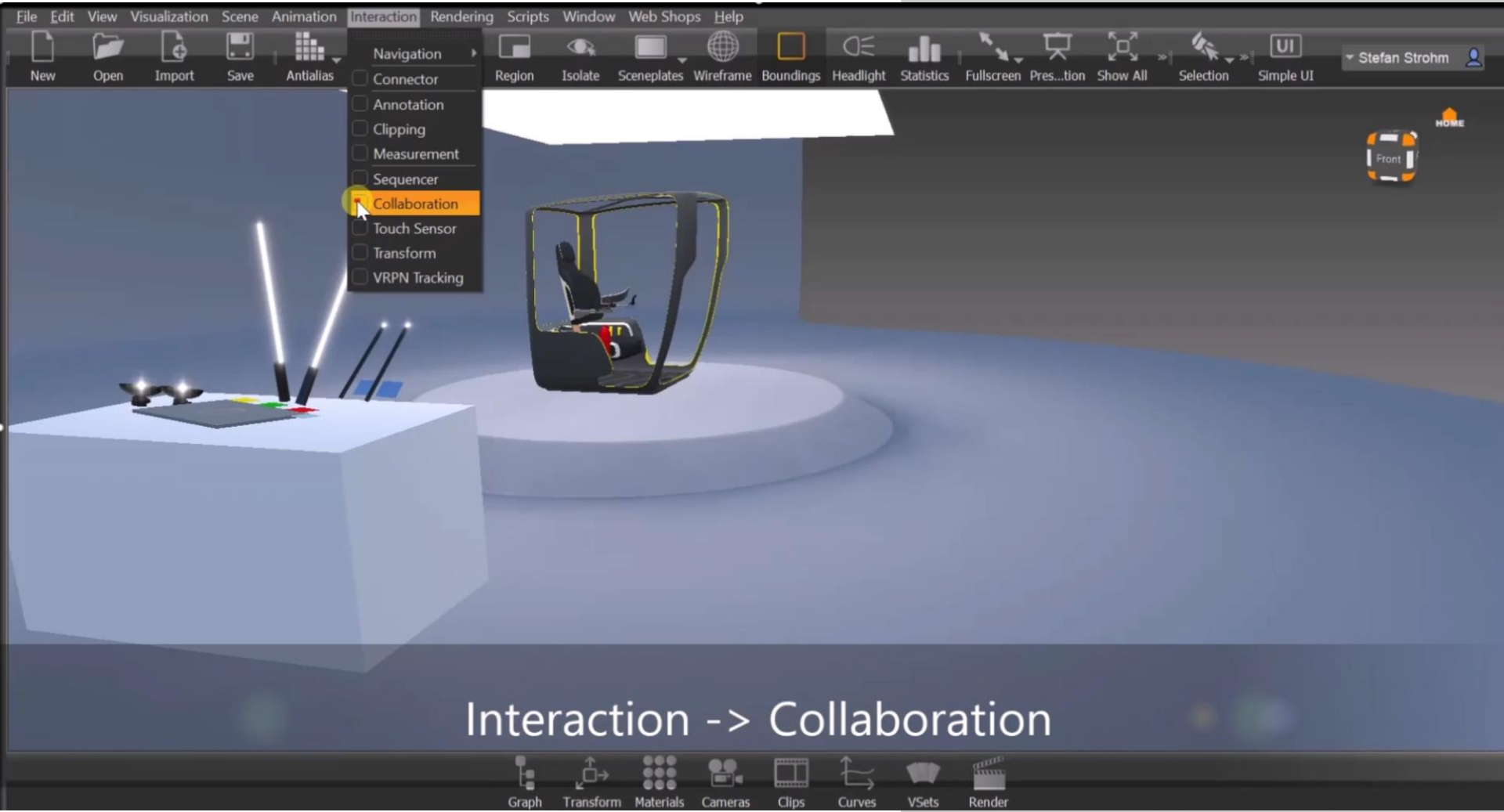

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Scenegraph
File Edit Create View Select
Scene Graph
display armauflage
SubdivFace#69355
SubdivFace#69356
SubdivFace#69357
DisplaySurf
Surf2
Surf1
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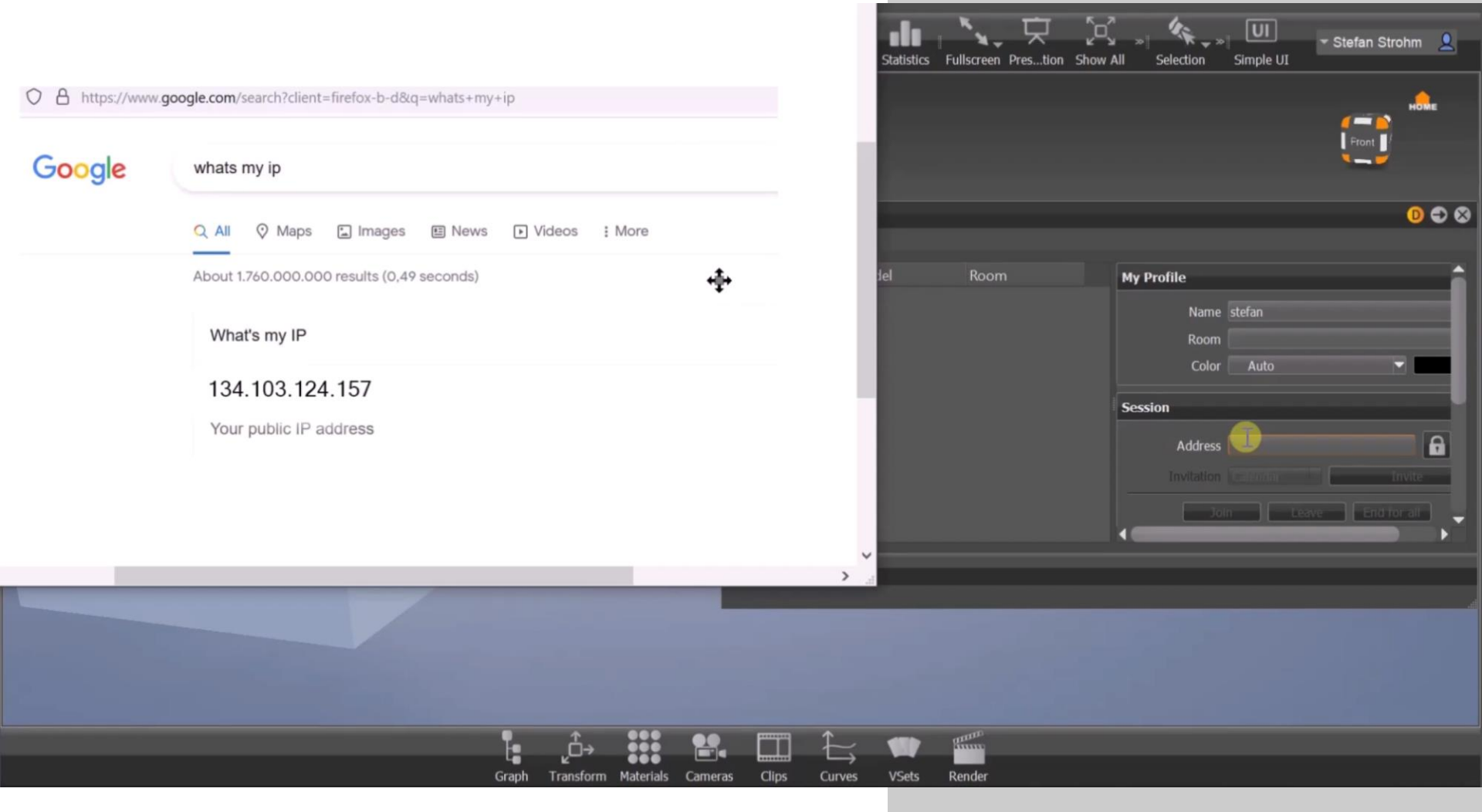

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cube
faceA
faceB
faceC
faceD
screen
faceF
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Viewpoints
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Hand Poses Only
Teleport Ground
Calibrate Ground
Show Avatars
Flashlight
Gather Users
Measure
Move
_Collab_TouchSensors_NoAnim.vpl 12 : 28
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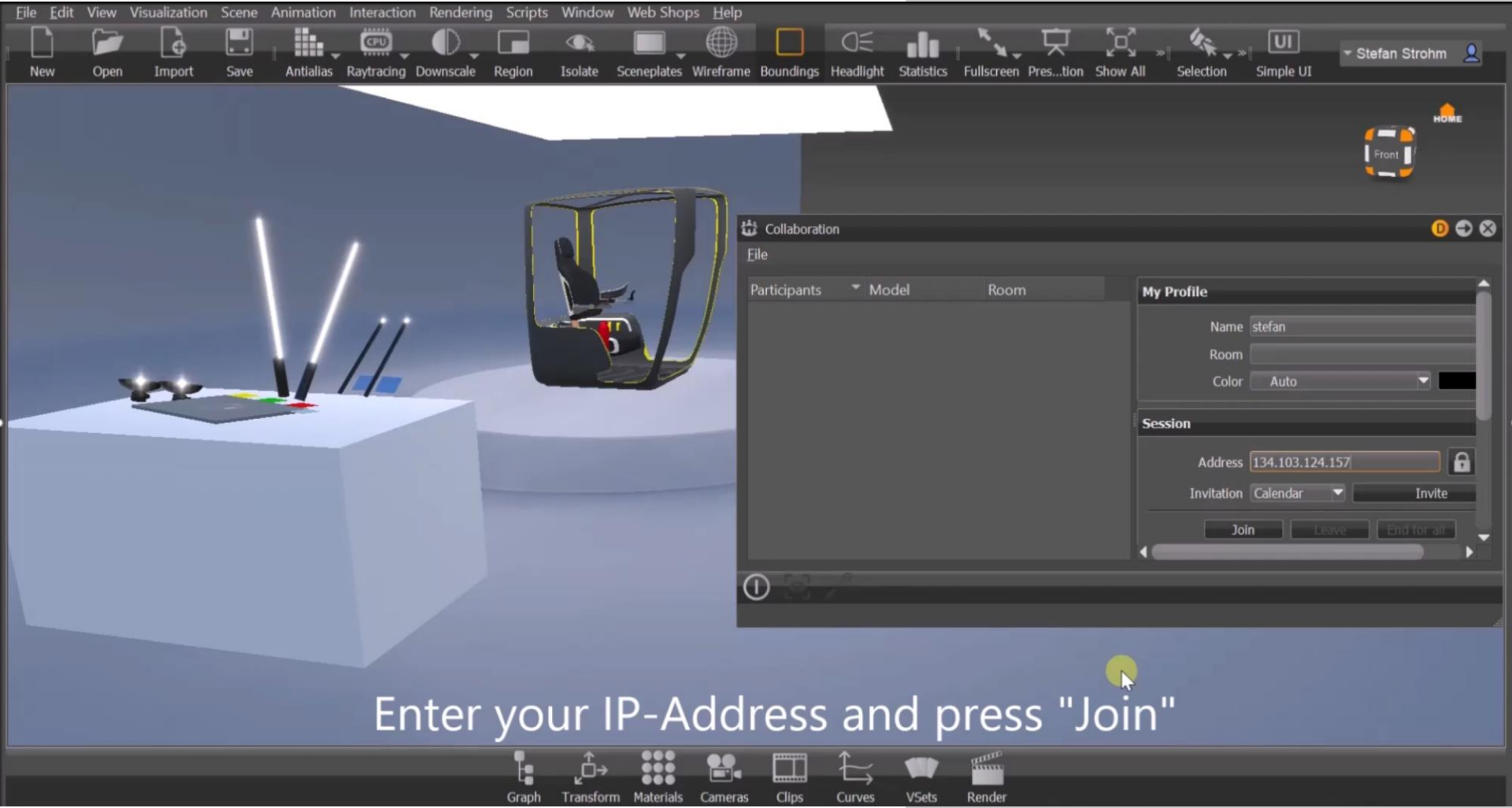

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Start a VRED VR Collaborative Session

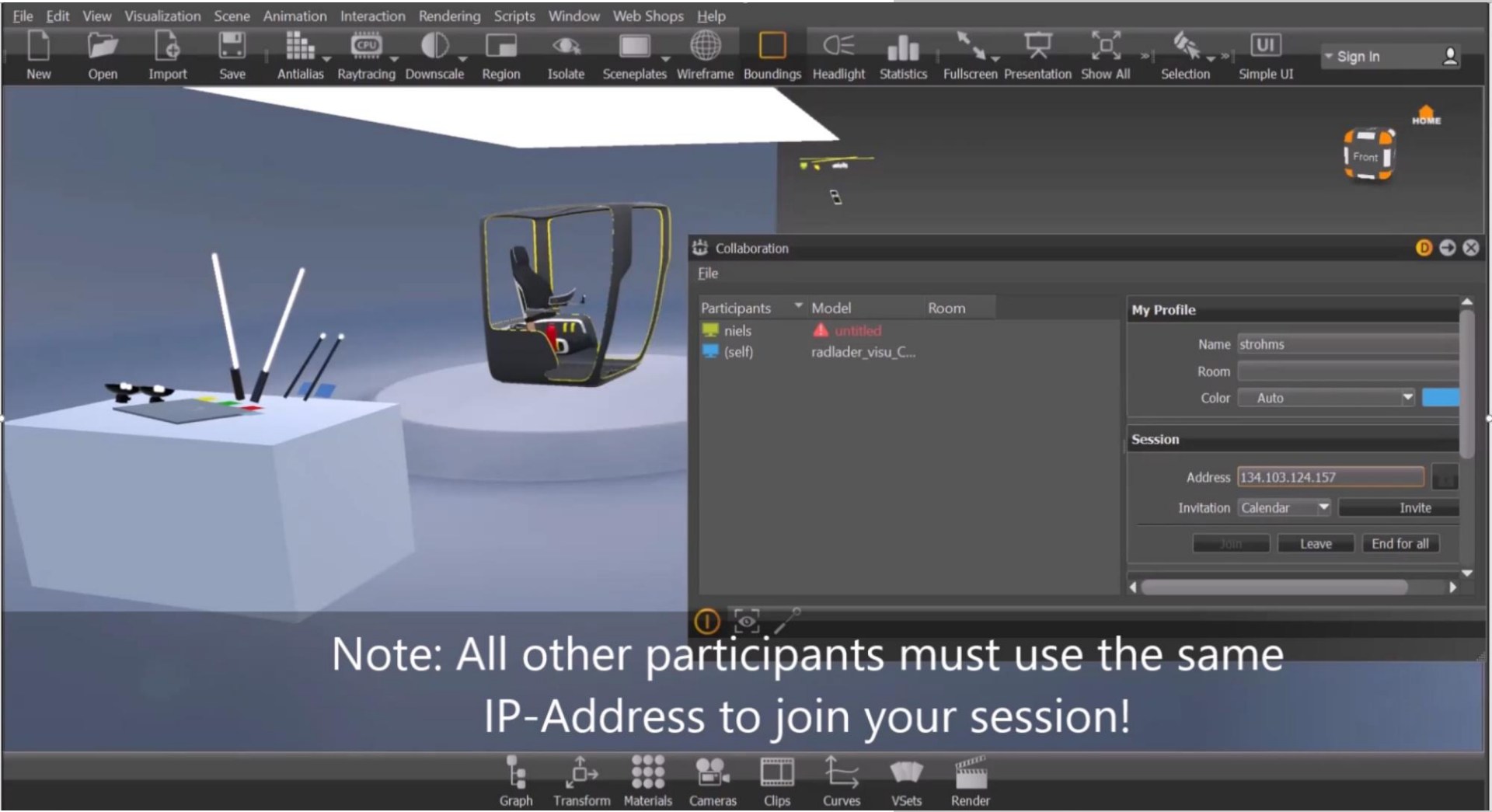
Step by step

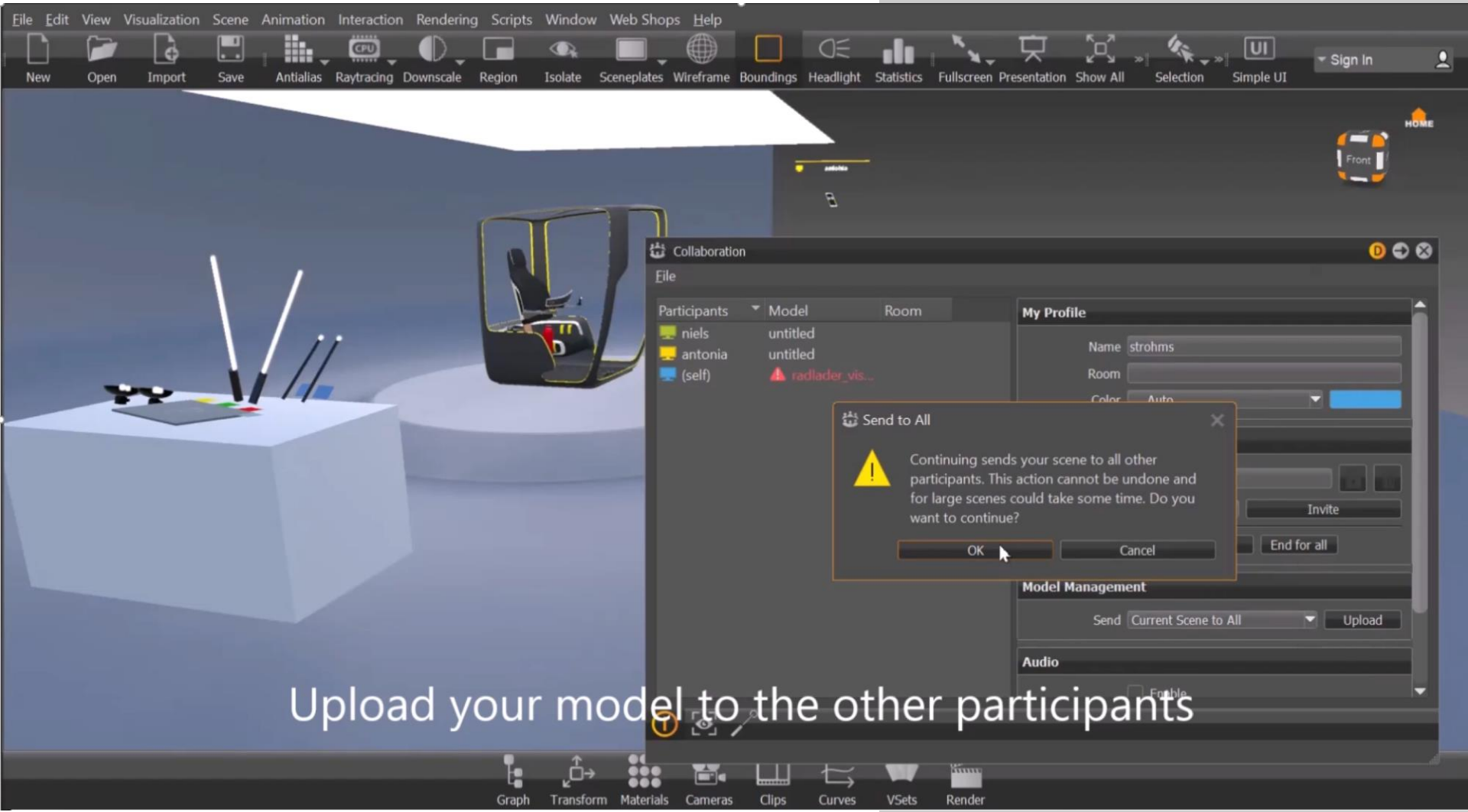

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New Open Import Save Antialias
Navigation
Connector
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Clipping
Measurement
Sequencer
Collaboration
Touch Sensor
Transform
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Interaction -> Collaboration
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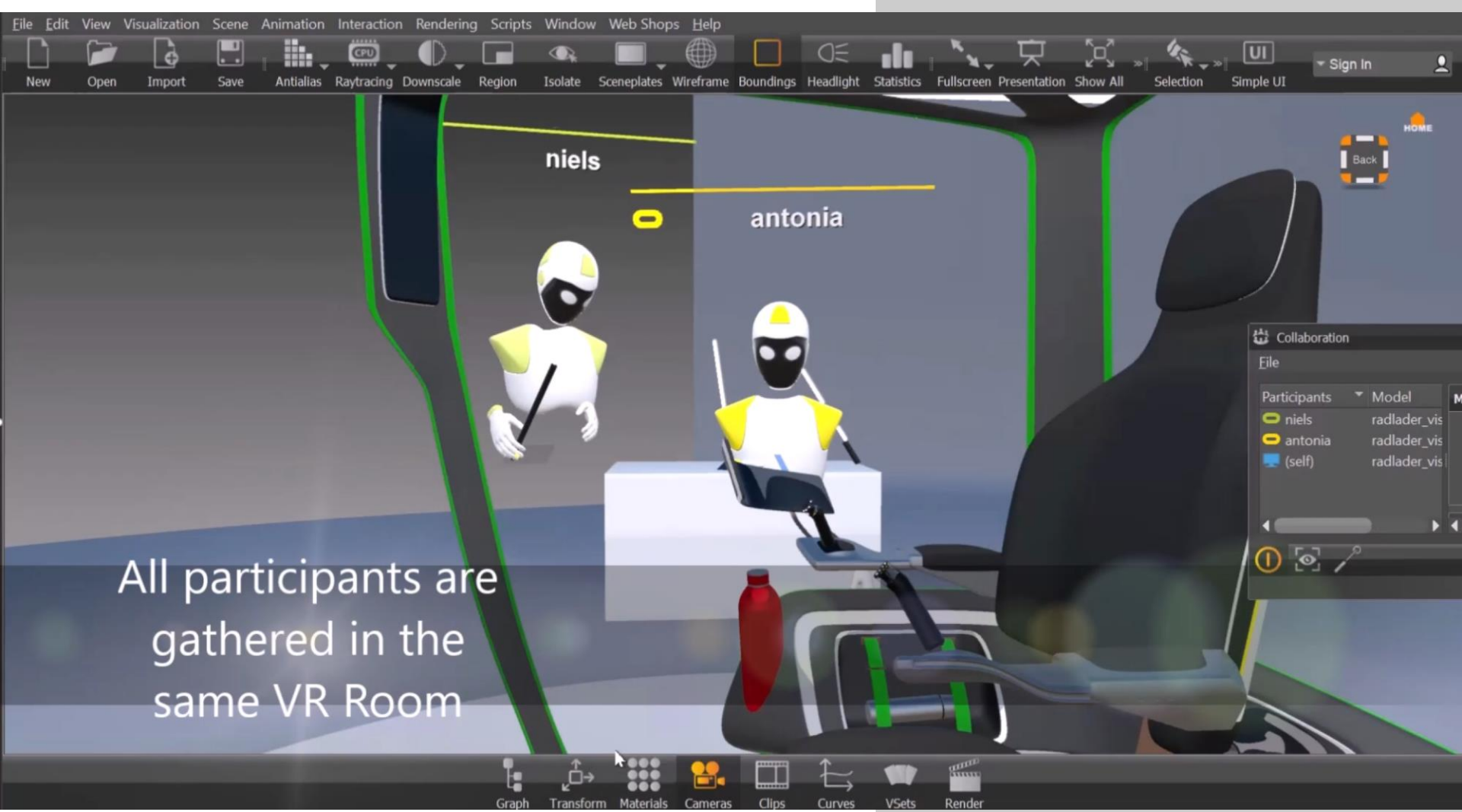

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Maps
Images
News
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More
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Invite the other participants by sending your IP-Address


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Note: All other participants must use the same
IP-Address to join your session!
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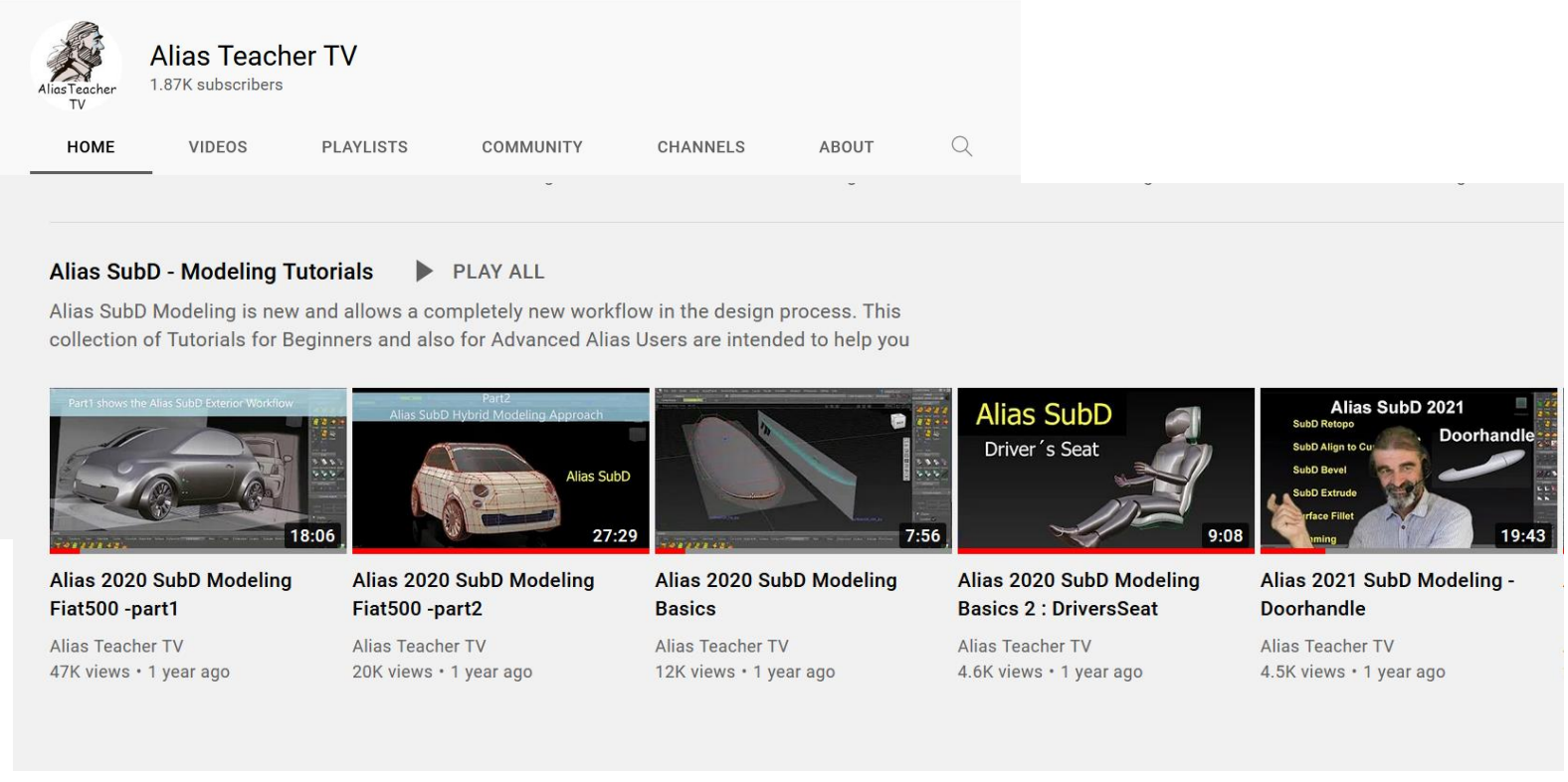

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Send to All
Continuing sends your scene to all other participants. This action cannot be undone and for large scenes could take some time. Do you want to continue?
OK
Cancel
Invite
End for all
Model Management
Send Current Scene to All
Upload
Audio
Enable
Upload your model to the other participants
Graph Transform Materials Cameras Clips Curves VSets Render


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All participants are gathered in the same VR Room
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Link – ALIAS Teacher TV

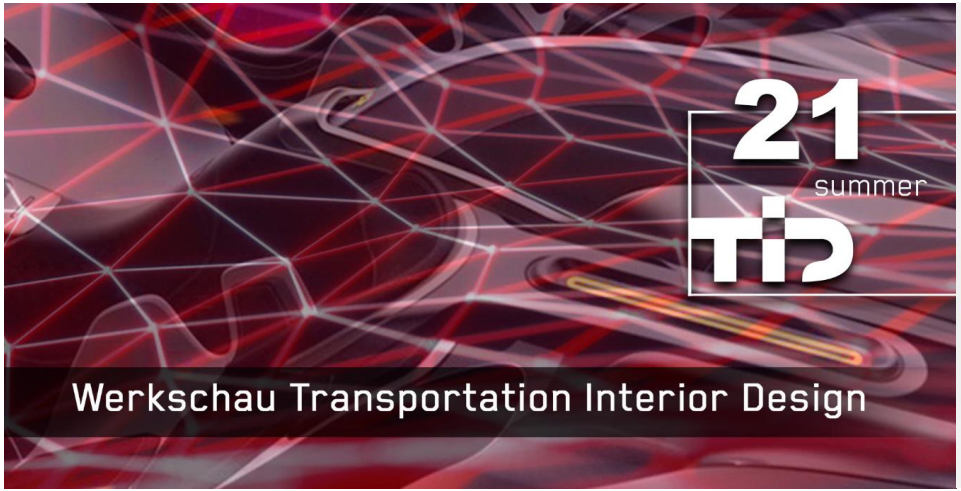
- https://www.youtube.com/channel/UC8i8si8LiR0NN7PTDcsfBOg

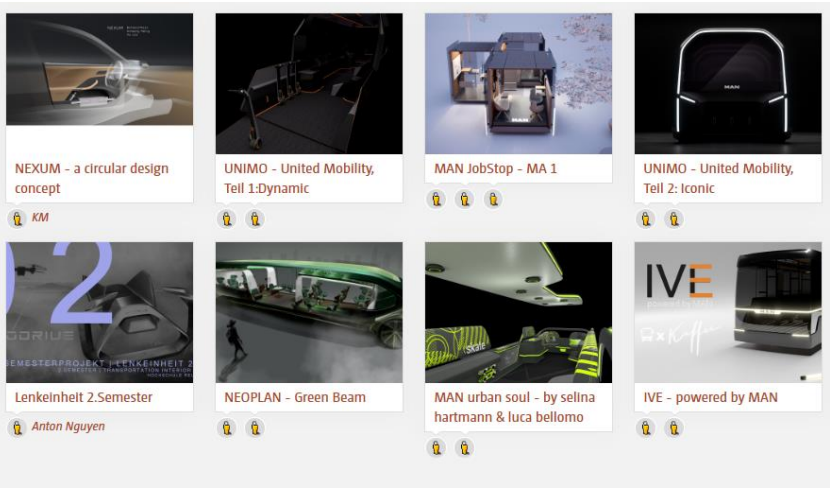


Links – Transportation Interior Design

Reutlingen University
Transportation
Interior Design

Online Exhibition - https://reut.incom.org/project/17





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