Concept of Operations for Photorealistic Media

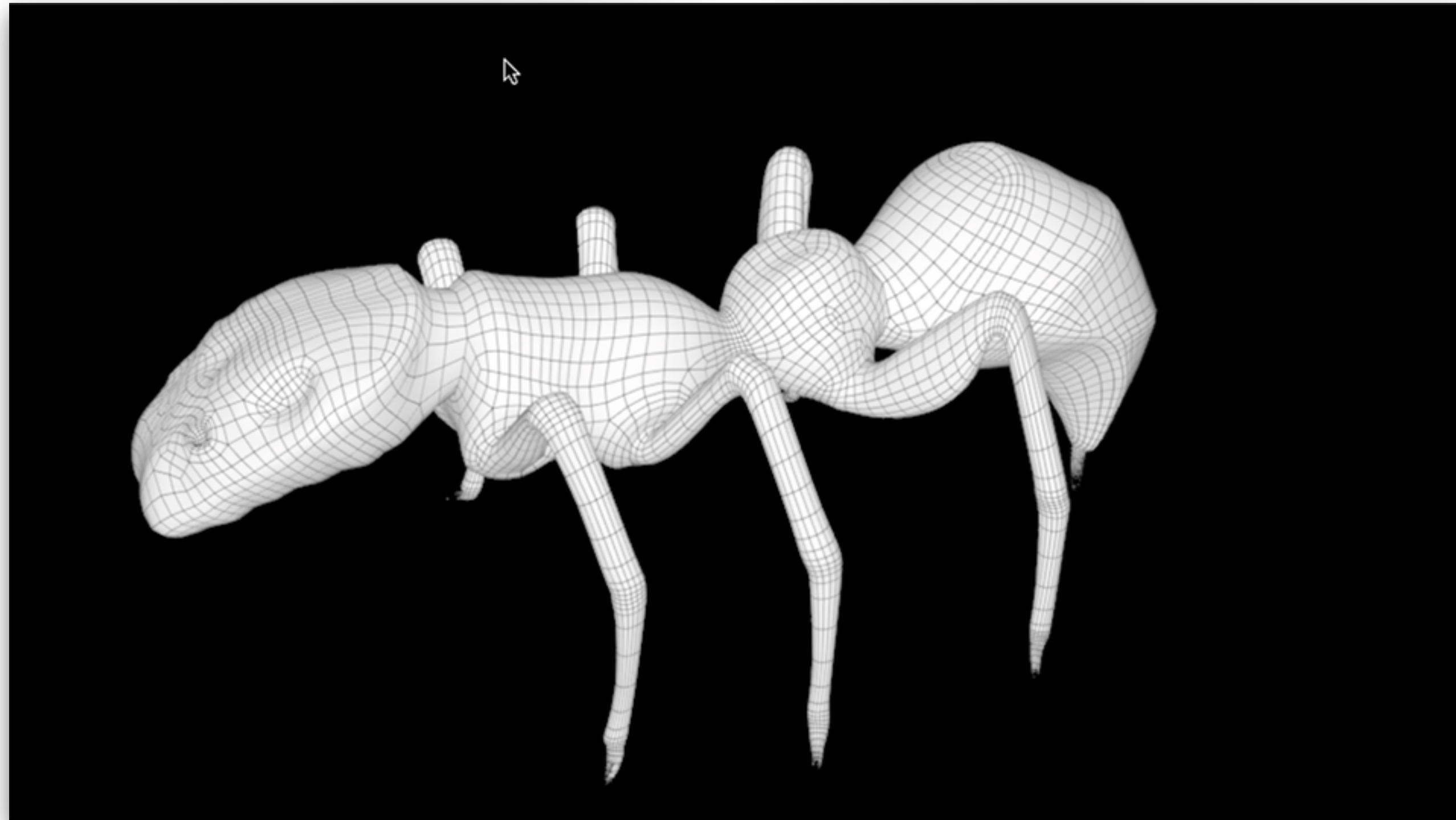1. Introduction to Pipeline Work

Lekture: **Understanding the importace of Pipeline Work**

Exercise: **Fixing a non-renderable model**

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University of
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Fixing a non-renderable model

Source: Eberhard Hasche

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2. Modeling: Basic Considerations

Lectures

- Understanding the concept of smoothing, beveling and fencing for polygone models to hold the shape

- Trouble shooting methods

Exercises

- Smoothing the Geometry

- Beveling vs. Fencing

- Trouble shooting methods

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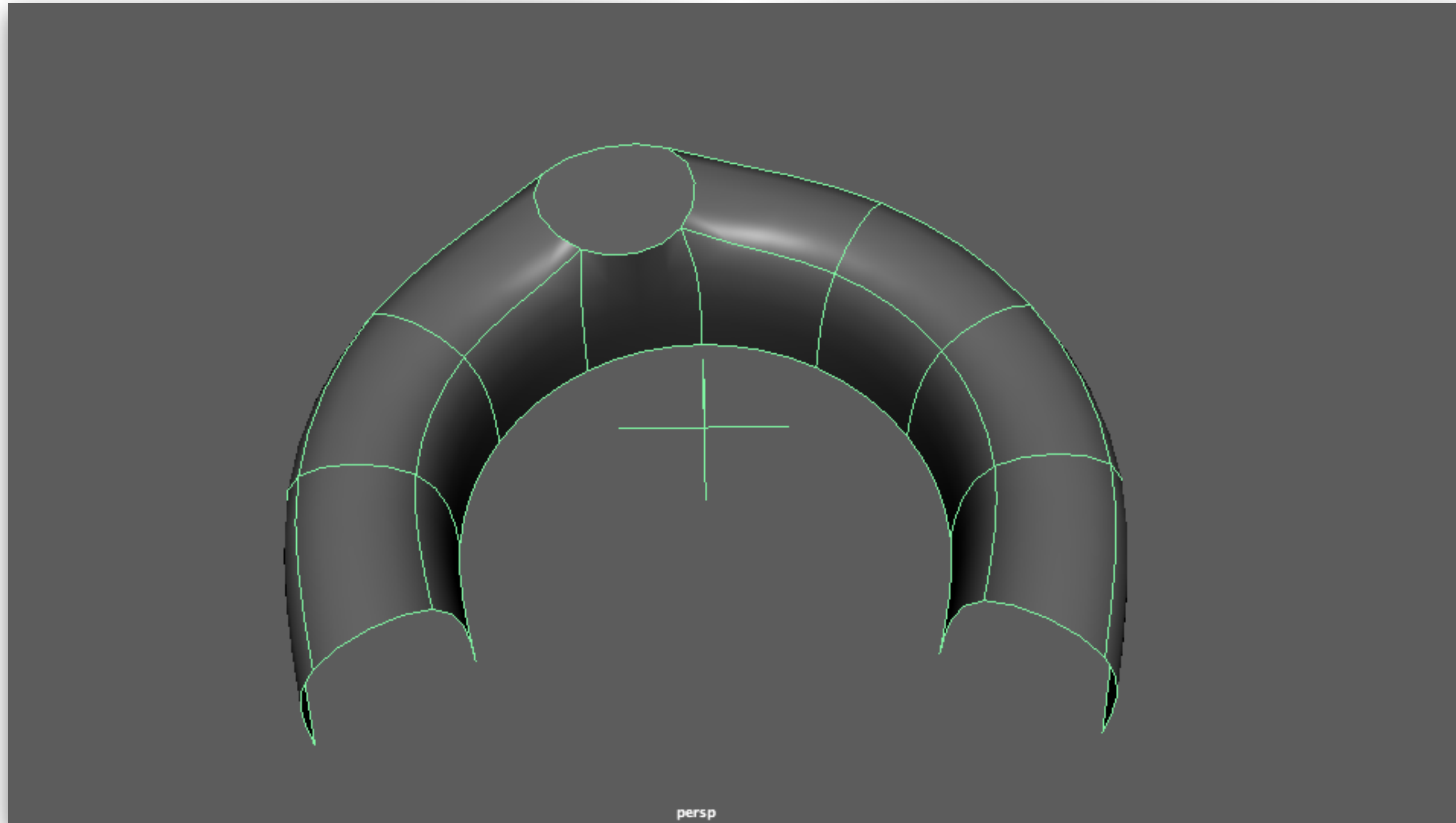
Fixing corrupted geometry

Source: Eberhard Hasche

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3. Hard Surface Modeling

Lectures

- Using snapping as an important function to generate precise geometry

- Using Glossy Highlights to estimate the quality of your model

- Utilizing Boolean Operations as a modeling tool

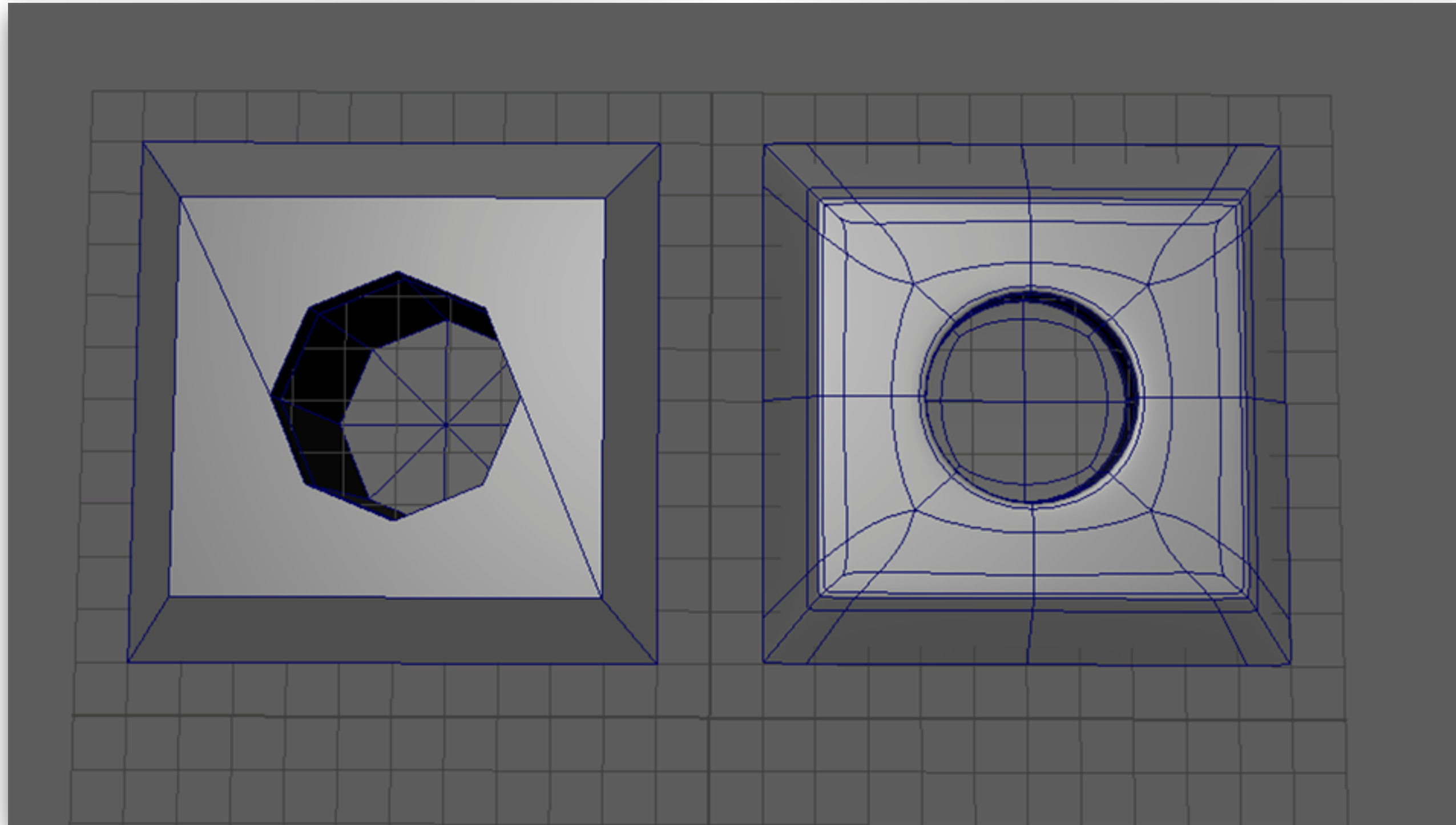- Understanding the need to clean up the geometry afterwards

Exercises

- Snapping strategies
- Fixing spherical poles
- Utilizing Boolean operations
- Cleaning up a model

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Utilizing Boolean operations

Source model: Paul Conner (Digital Tutors)

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4. ASSET 1: Cleaning up an Internet Door Model
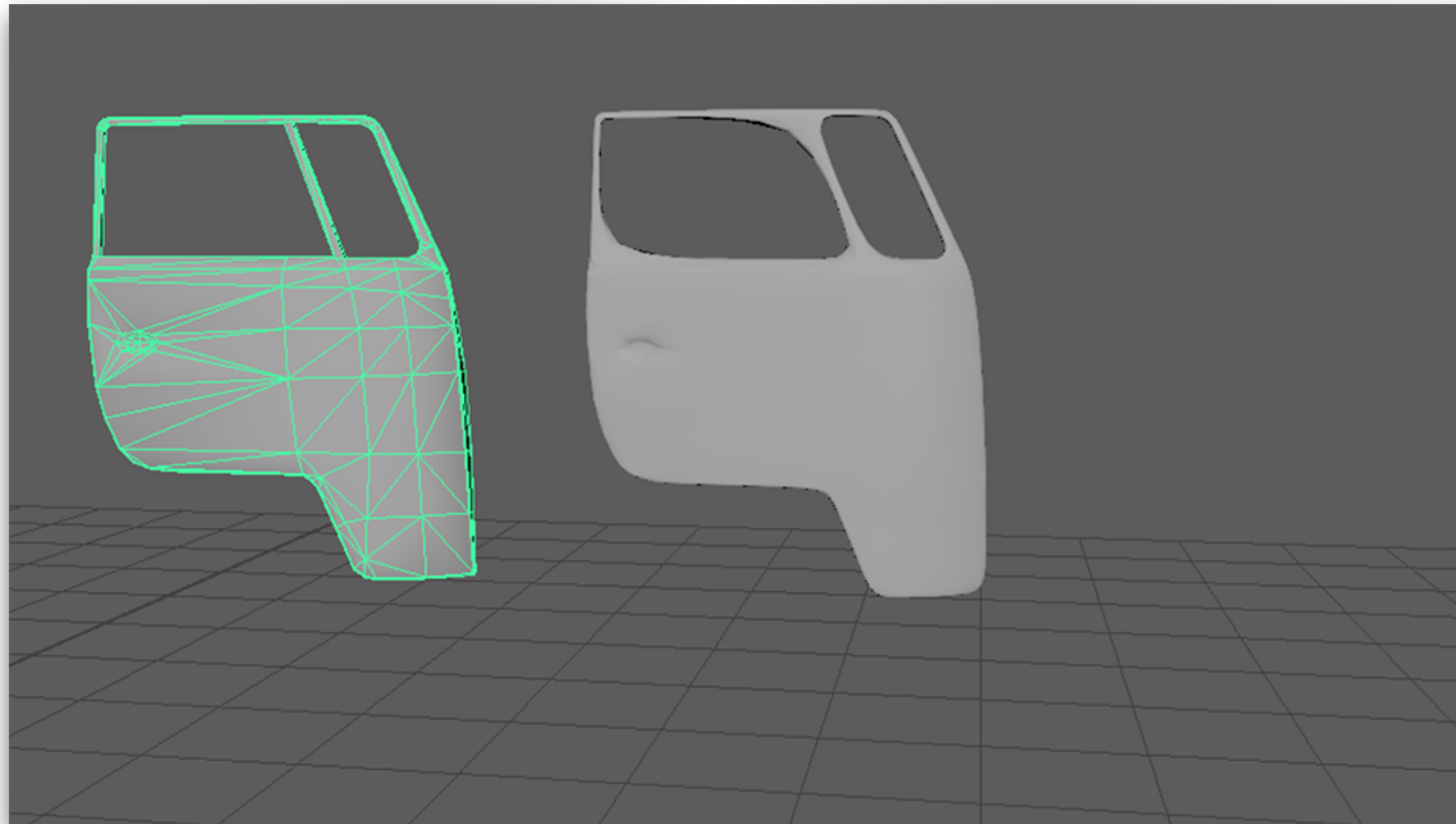
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5. Sculpting - Working with Dynamesh in Brush

   Lectures

   - Understanding the concept of low poly and high poly objects
   - Working in ZBrush

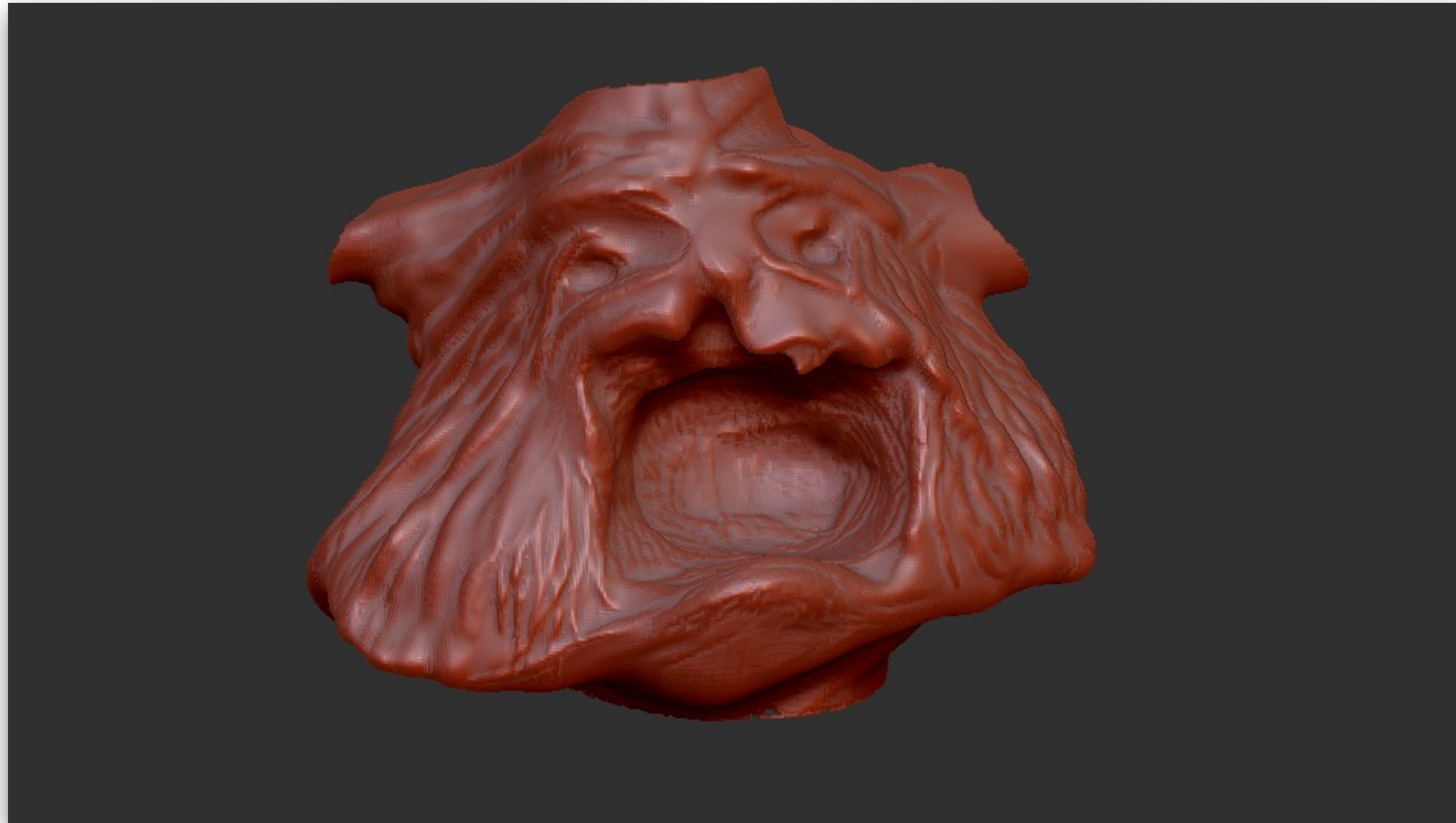   Exercises

   - Creating a free form character using Dynamesh

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Creating a free form character using Dynamesh

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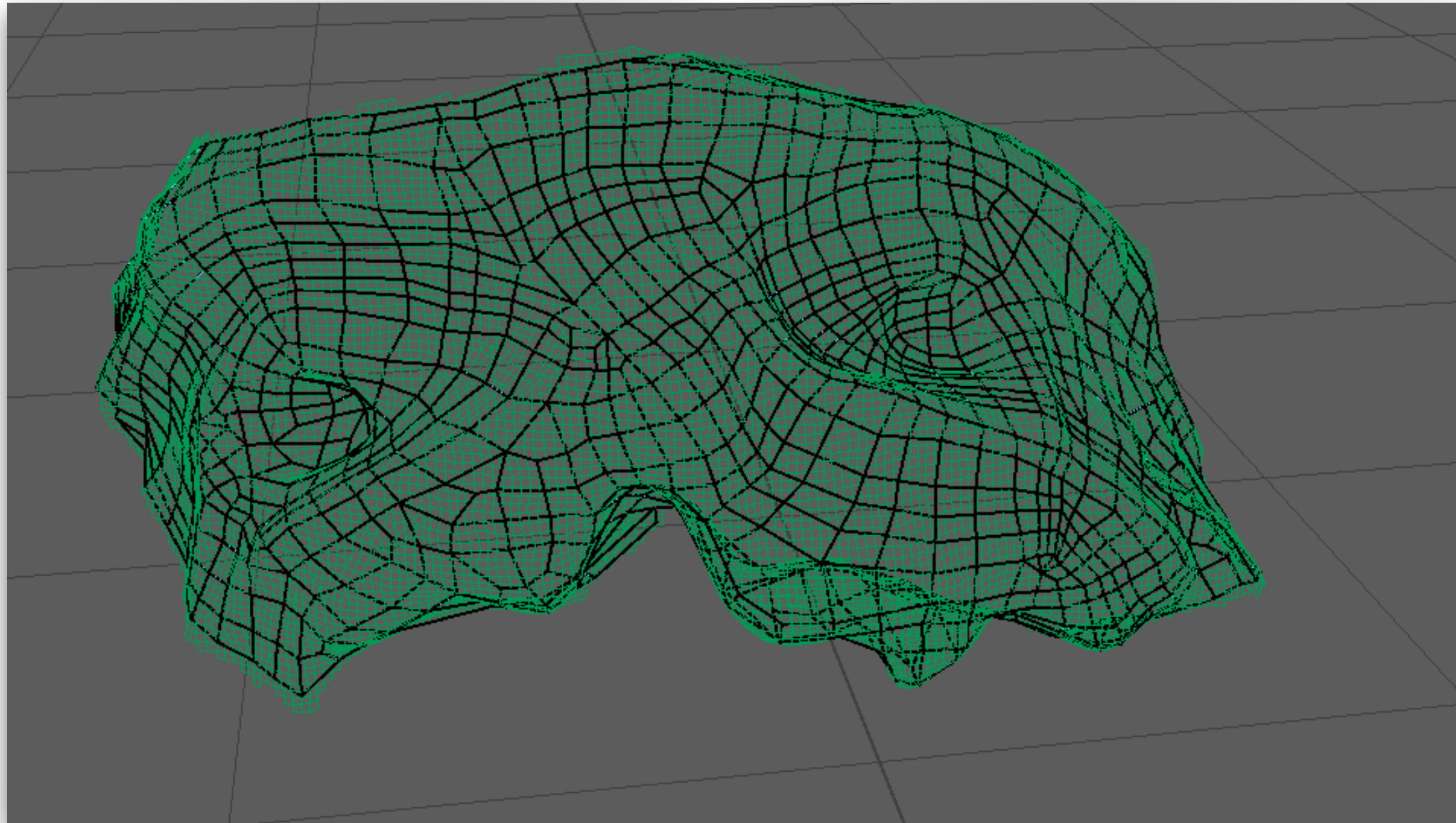University of
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6. ASSET 2: Re-toplogizing a ZBrush Model

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7. The UV-Map

Lectures
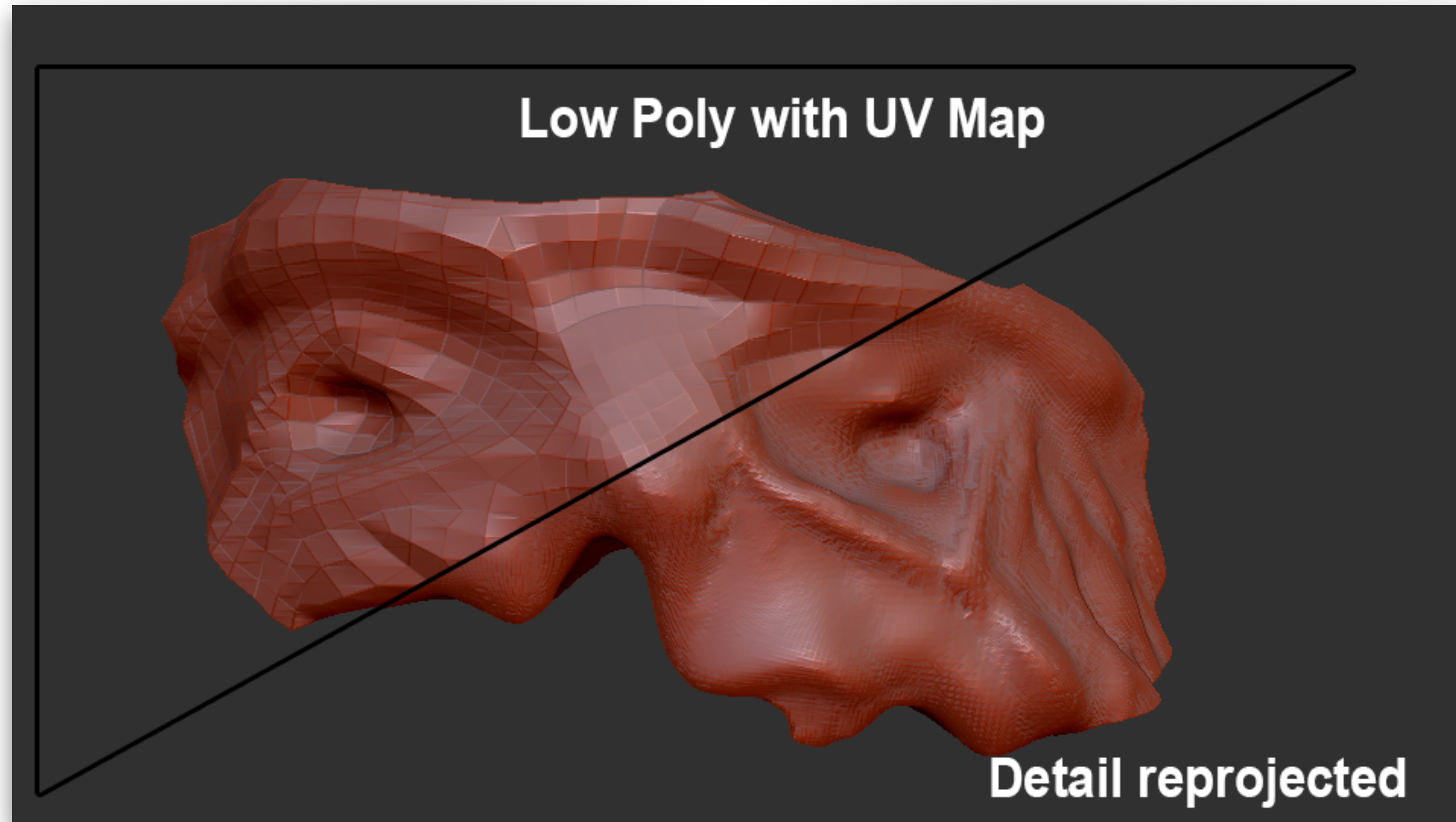
- Understanding the importance of UV-Mapping
- Reprojecting geometry detail
- Applying Displacement- and Bumpmaps

Exercises

- Creating an UV-Map manually
- Reprojecting detail onto the dynamesh model
- Exporting and Applying displacement and bump maps

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Low Poly with UV Map

Detail reprojected

Exporting and Applying displacement
and bump maps

Source: Eberhard Hasche

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8. ASSET 3: Creating a UV-Map

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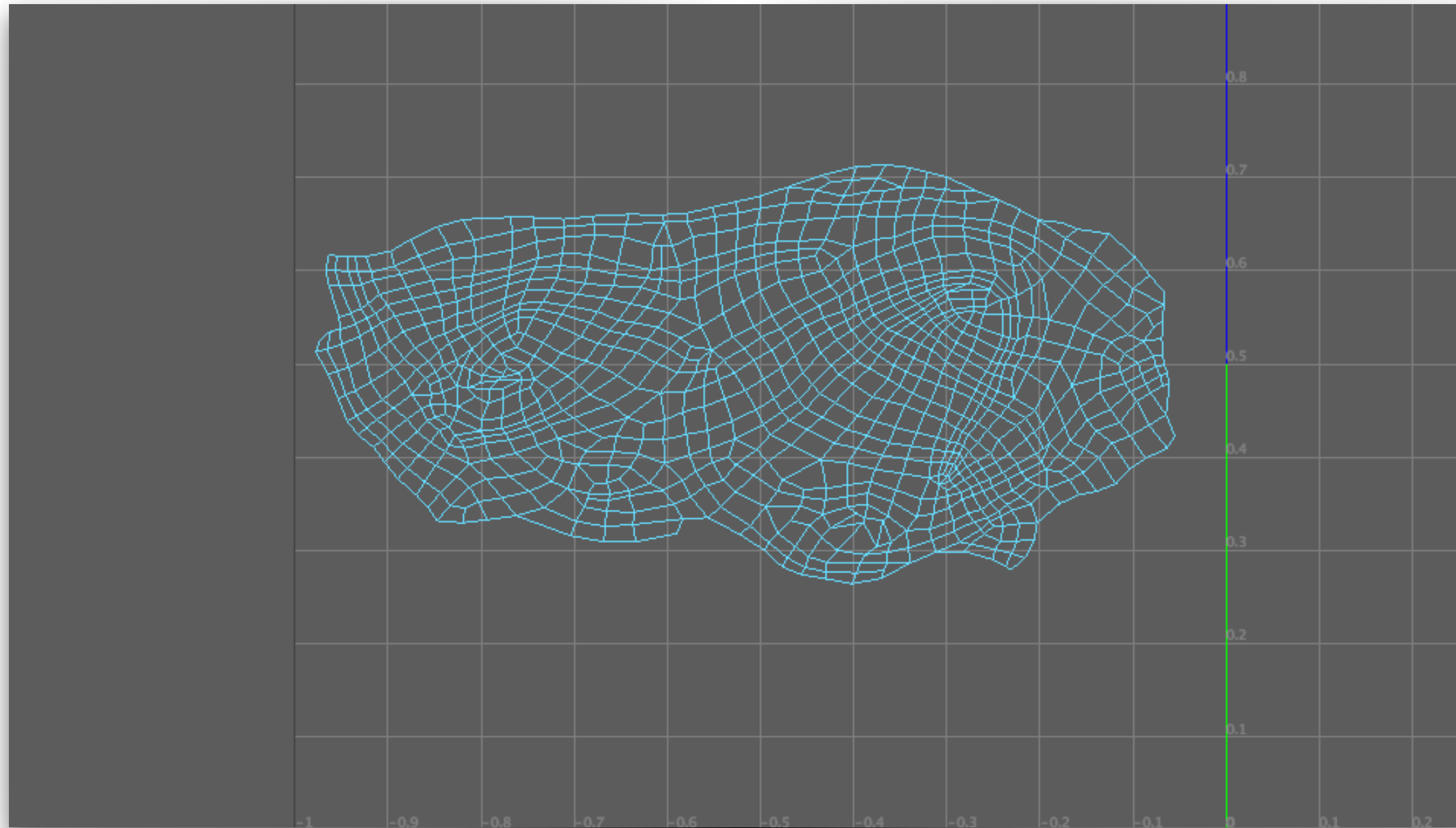
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9. 3D-Matte Painting (Wallpaper technique)

Lectures
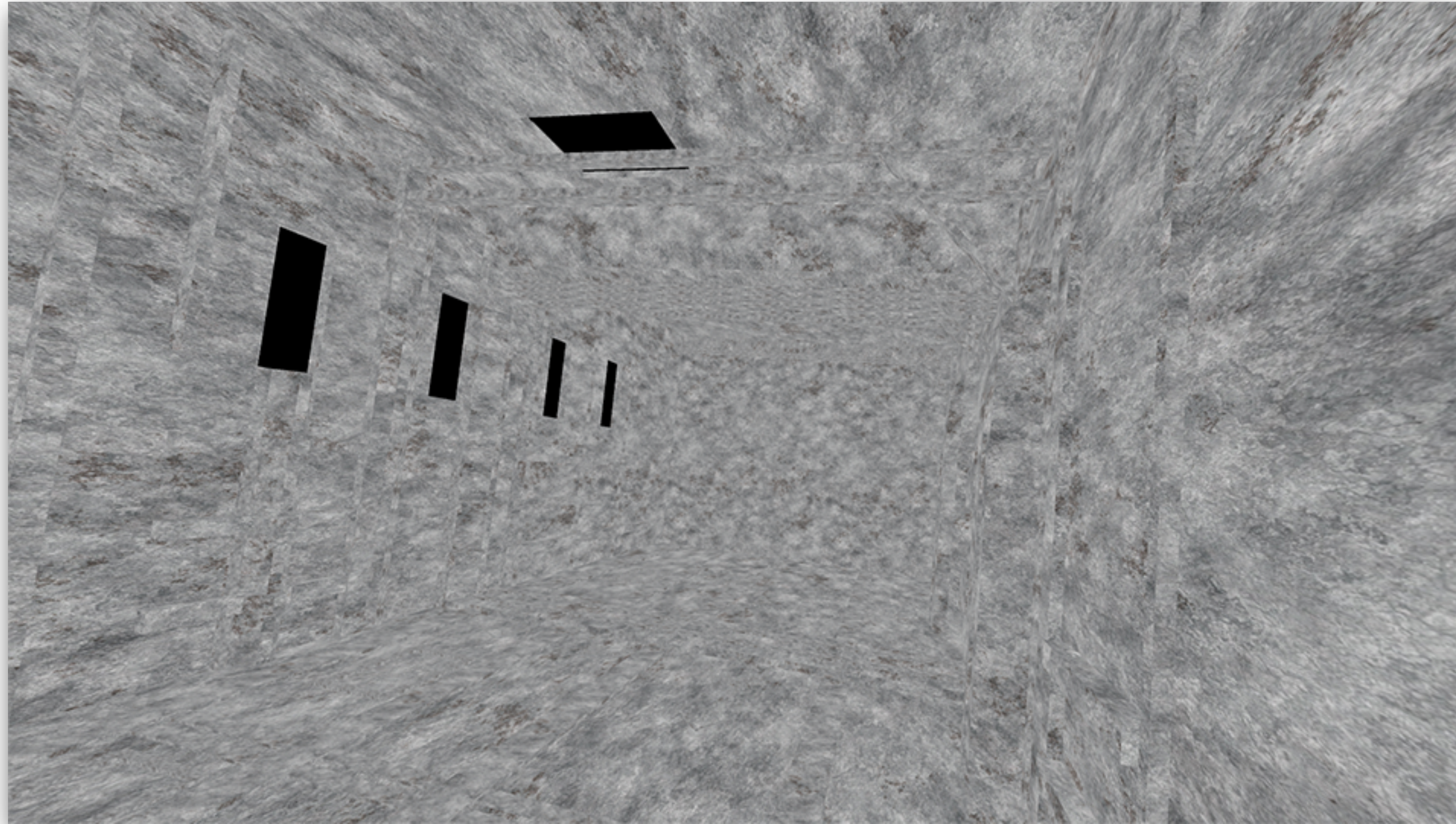
- Introduction to Digital Matte Painting (DMP)
- Introduction to wallpaper technology
- Creating a Wallpaper DMP

Exercises

- Creating and exporting Wallpaper renders

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Creating and exporting Wallpaper renders

Source: Eberhard Hasche

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10. ASSET 4: Creating a 3D-Matte Painting

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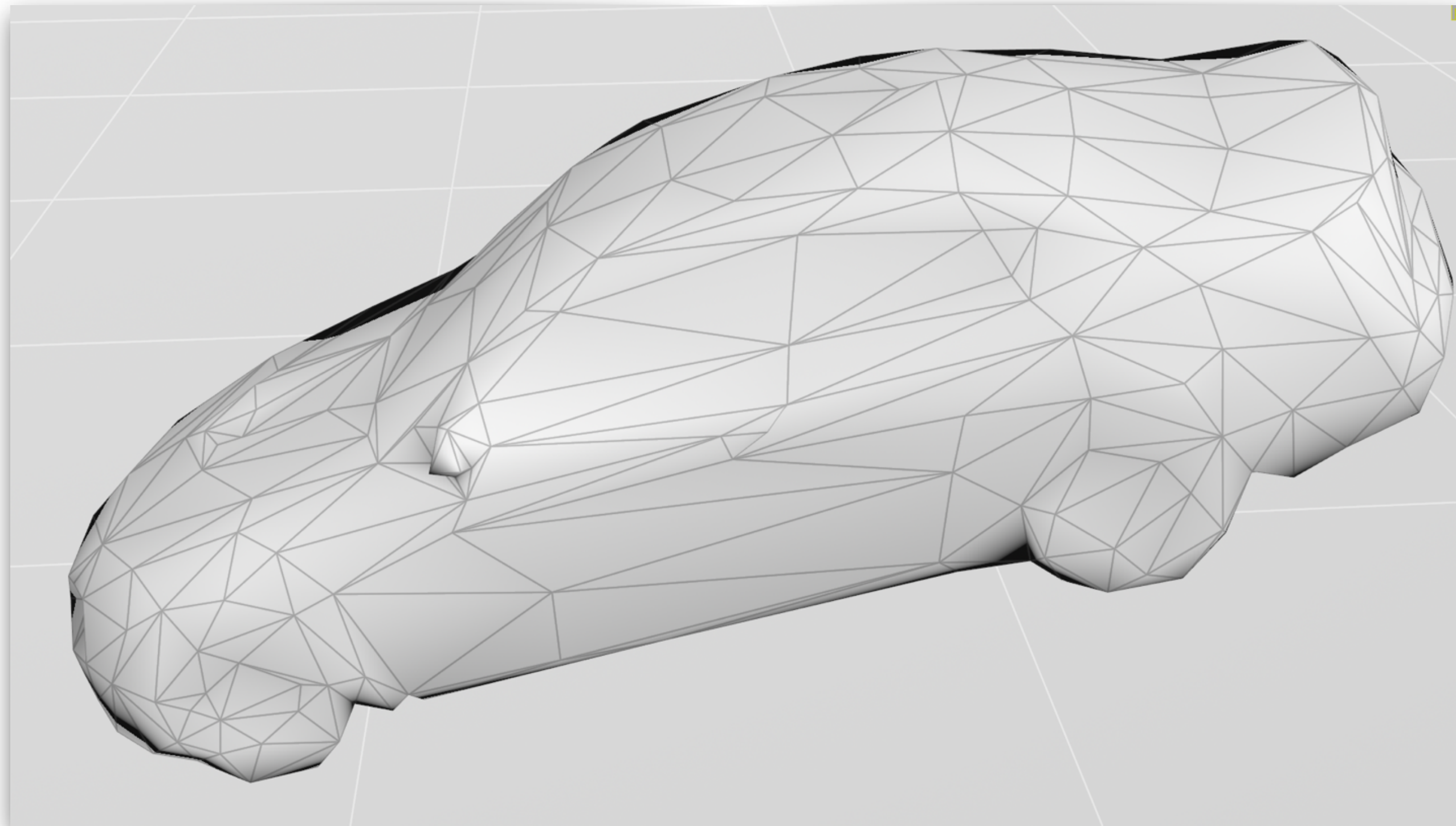11. Modeling for Physical Simulation

Lectures

- Difference between animation and simulation
- Working with scale, units and time
- Modelling for physical simulation
- Different types of colliders

Exercises

- Cleaning up a model for physical simulation
- Creating collider geometry for a complex model

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Creating collider geometry for a complex model

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