CS148: Maya Lecture

October 9th, 2017
David Hyde
Outline

- Rendering: A Bird’s Eye View
- 3D Art Tools
- Maya
  › Outline
  › Demo
Rendering: A Bird’s Eye View

AND WHERE DOES CS148 FIT IN?
Rendering Overview

Final Image

Implementation

Art

Libraries/Frameworks
Math
Models/Meshes
Textures
Materials
Rendering Overview

Final Image

Implementation

Libraries/Frameworks (HW2)
Math
Models/Meshes
Textures
Materials

Art

Stanford University
Rendering Overview

Final Image

Implementation

Art

Libraries/Frameworks
Math (Lectures + HW4)
Models/Meshes
Textures
Materials
Rendering Overview

Final Image

Implementation

- Libraries/Frameworks
- Math
- Models/Meshes

Art

- Textures (HW5)
- Materials

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Rendering Overview

Final Image

Implementation

Art

Libraries/Frameworks
Math
Models/Meshes
Textures

Materials (HW4)
3D Art Tools

BUT I'M A PROGRAMMER.
Hard-Surface Modeling
Organic Modeling

ZBrush
Animation

MAYA

Houdini
Textures

Gimp.
Materials

Substance Designer
Maya Overview

A TOOL WHOSE ONLY REDEEMING QUALITY IS THAT IT’S BETTER THAN BLENDER (JK).
User Interface
User Interface

This Is Fine.
User Interface

Tools
User Interface

Mode Menu

Tools
User Interface

Mode Menu

Tools

Mode Specific Menus

- Mesh
- Edit Mesh
- Mesh Tools
- Mesh Display
- Curves
- Surfaces
- Deform
- UV
- Generate
- Cache
- Help
User Interface

Mode Menu

Tools

Viewport Options

Common Menus

Mode Specific Menus

Viewport Options

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User Interface

Common Menus

Mode Specific Menus

Viewport Options

Tools

Mode Menu

Timeline

Channel Box
User Interface: Attribute Editor
User Interface: Outliner (Scene Hierarchy)

Alternate way to display the outliner + Single Viewport
User Interface: Select Tool
User Interface: Right-Click Hold Menu
User Interface: Move Tool

Keyboard Shortcut: W
User Interface: Rotate Tool

Keyboard Shortcut: E
User Interface: Scale Tool

Keyboard Shortcut: R

Scale Manipulator/Gizmo

Manual Editing
Double click on ANY tool.
Enable Soft Select and change radius.
User Interface: Tool Symmetry

Enable Symmetry and Select Axis.
User Interface: Viewport

Viewport

Single Viewport
User Interface: Viewport

Change Viewport View
User Interface: Viewport
User Interface: Viewport

4 Viewports:
- Perspective
- Front
- Top
- Side
User Interface: Camera Controls

- Rotate Camera around Scene:
  - Alt + Left Click + Drag
- Move Camera around Scene:
  - Alt + Middle Click + Drag
- Zoom Camera:
  - Alt + Right Click + Drag
  - Scroll Up/Down
- Focus:
  - Select Object + ”F”
Make sure these are checked to export as OBJs.
Importing Mesh

How to Get to Dialog Box
Importing Mesh

Import Dialog Box
Importing Mesh

File Type Selector
Importing Mesh

Autodesk Maya 2018 - Student Version: utilities

Import Options

General Options
- Group
- Remove duplicate shading networks

Referencing Options
- Preserve references
- Load Settings: Load saved reference load state

Namespace Options
- Use namespaces

Options...
Creating Mesh (Polygon)
Creating Mesh (NURB)
Editing Polygon Meshes: Vertices
Editing Polygon Meshes: Faces
Editing Polygon: Extrude

Modeling Mode. Edit Mesh > Extrude.
Editing Polygon: Bevel

Modeling Mode. Edit Mesh > Bevel.
Create Curve
Create NURBS curve.
From Curves to Surfaces: Extrude (NURBS)

Create NURBS circle and align to curve.
From Curves to Surfaces: Extrude (NURBS)

Modeling Mode. Surfaces > Extrude (More Options).
Modify > Convert > NURBS to Polygons.
Exporting Mesh (Polygon) – Getting Triangles

Modeling Mode. Mesh > Triangulate.
Exporting Mesh (General)
Maya Demo

FINALLY.