BIMteractive: Pushing the Boundaries of Traditional Walkthroughs

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Learning Objectives

At the end of this class, you will be able to:

- Use your production models for marketing and presentation purposes through less traditional workflows
- Explain the benefits of having a more interactive method of communicating designs and winning new business
- Describe a practical workflow for integrating your intelligent models in a game engine environment for producing interactive navigation
- Explain the challenges and overcome them to effectively take full advantage of various 3D visualizations tools

Game Engines

Why Game Engines?

Real Time Visualization and Exploration

Built-in Interactivity in the Presentation

Flexible Interaction by Combining Assets: Videos, Sound, Textures, Lighting to act when triggered by an action
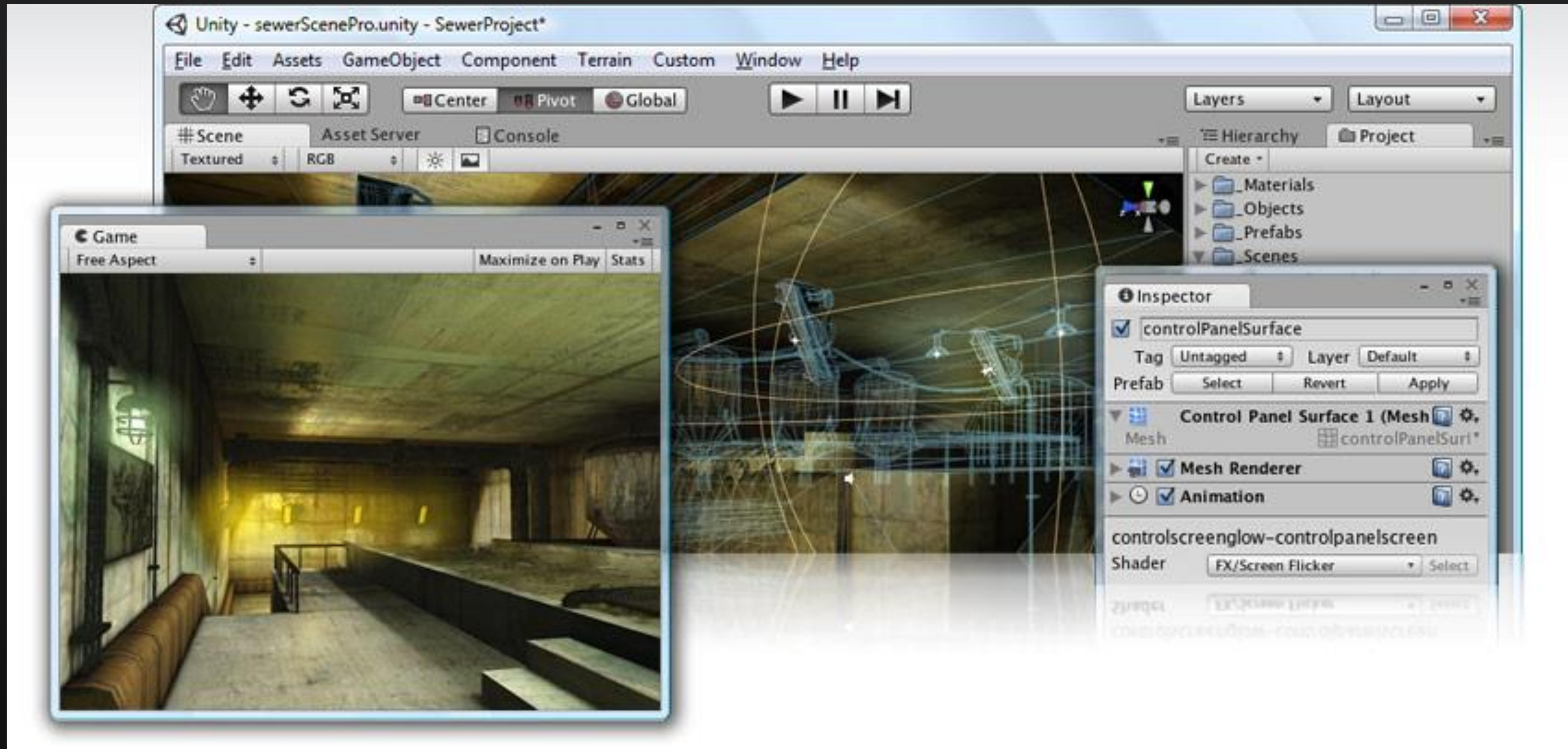
Easy Sharing of the final output (web based or .exe viewing)

Suitable First and Third Person Perspectives

Based on the Complexity Little to None Scripting Knowledge (Assets)

Supports model reference for constant design iteration from the BIM models

What is a Game Engine?

Engines with Free Editions

Adventure Game Studio

BYOND

CryEngine 3

Defold

dim3

DX Studio

Future Pinball

Game Editor

Game Maker

NeoAxis Game Engine

Papaya Social Game Engine

Source engine

Stencyl

Unity

Unreal Engine 3
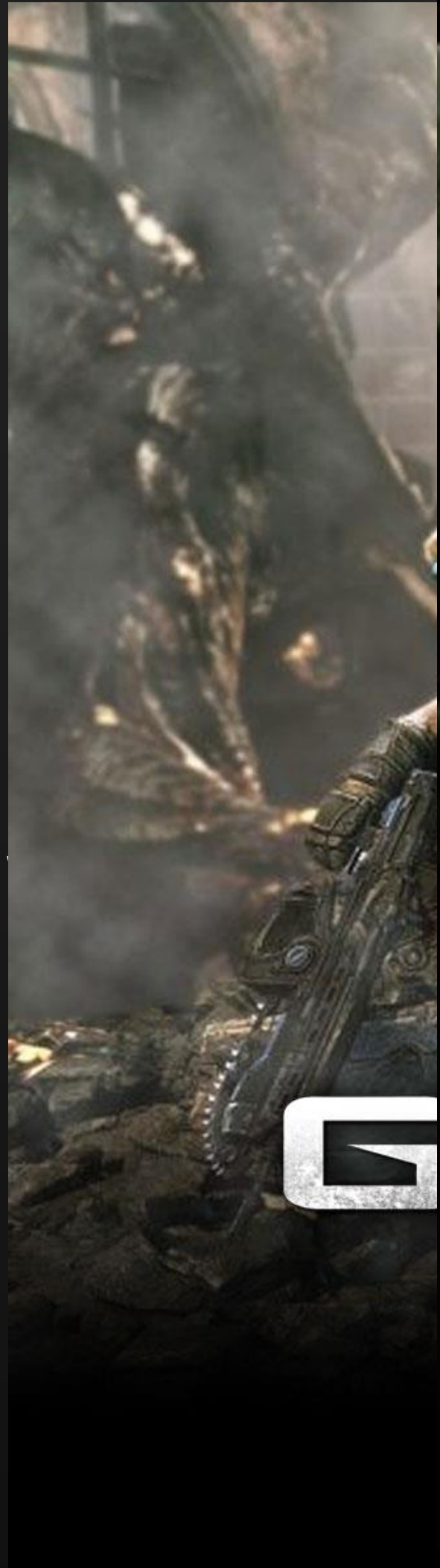
Visual Pinball

Wintermute Engine

World Builder

UDK (Unreal Engine)

Games powered by Unreal

UDK Benefits

Actively developed for over a decade as a game engine for first person shooters

Huge community behind

Most used game engine around

You can do whatever you want if you know how to do that…

Basically the strongest features of UDK are customization, interactivity, strong visuals and post process effects, material creation is almost perfect...

Drawbacks

Requires mesh optimization (low poly) and lots of normal maps

Learning curve could take quite a bit

Lighting builds could take a lot of time (lightmaps with GI)

If you don't know how to program or you're not into game engine, it could take a while to get an .exe working properly

It is in general more time consuming

Content available only suitable for games

Unreal Falling Water

Unity 3D

Games powered by Unity

Need For Speed World
Tiger Woods PGA Tour
Wolf Quest
Global Conflicts
1000s more…

Unity Web Access and Viewing

Unity Benefits

- It is asset-centric rather than code-centric, placing the focus on the assets in much the same way as a 3D modeling application and not so much in a Code Editor.
- Affordable and easy to use right out of the box.
- Ability to import and utilize CAD and BIM models as well as Support update Iterations.
- Large Format Support
- Scripting is powerful and adding them is easy
- Strong Asset Store and Lots of Documentation

BIM To Unity

AutoCAD Architecture/MEP/Civil 3D Workflow

DEMO

Revit Workflow

DEMO

Revit Workflow via 3ds Max

DEMO

And Sketch Up too?

DEMO

Publishing Workflow… Let's PLAY!!!

DEMO