

UDK Game Engine

Master Project Preparation

UDK

- The **Unreal Engine** is a game engine developed by Epic Games, first illustrated in the 1998
- Games like Unreal Tournament 3, Rainbow Six: Vegas, Mass Effect series...

Simulation Research of Crime Scene Based on UDK

- They reviewed four Game Engines
 1. Unreal Engine, Quake Engine, LithTech Engine, Delta3D Engine
 2. Why Unreal?
 - Flexible and low-cost development
 - Powerful Unreal Editor
 - High-quality physics engine
 - Particle effects system
 - Many mature applications

Simulating visual impairments using the Unreal Engine

- They reviewed three Game Engines
 1. Unreal Engine, Source Engine, CryEngine
 2. Why Unreal?
 - Custom Modification tools in Unreal that helps different rendering outputs
 - Cheap

Real time Interactive Architectural Visualization using Unreal Engine

- They reviewed four Game Engines
 1. Unreal Engine, Unity 3d, CryEngine

	Unity 3	CryEngine 3	UDK
Photorealism	<i>Low</i>	<i>High</i>	<i>Medium</i>
Documentation	<i>Medium</i>	<i>Low</i>	<i>High</i>
Mobile devices	<i>Yes</i>	<i>No</i>	<i>Yes</i>
Licensing	<i>iOS 400USD</i>	<i>Free</i>	<i>Free</i>

CaveUDK: A VR Game Engine Middleware

- They present a high-level VR middleware based on Unreal Engine
- They used UDK because of C++
- Connecting to devices using DLL files

UnrealScript

- It is a C++-like language with some special features like inheritance, delegates and interfaces. only
- It is used for game development like serialization and networking. for

Programming Language support

- (DLLBind)ing DLLs from UnrealScript

Limitations:

- 32-bit DLLs only
- If UDK is available, 64-bit DLLs will be^a supported.

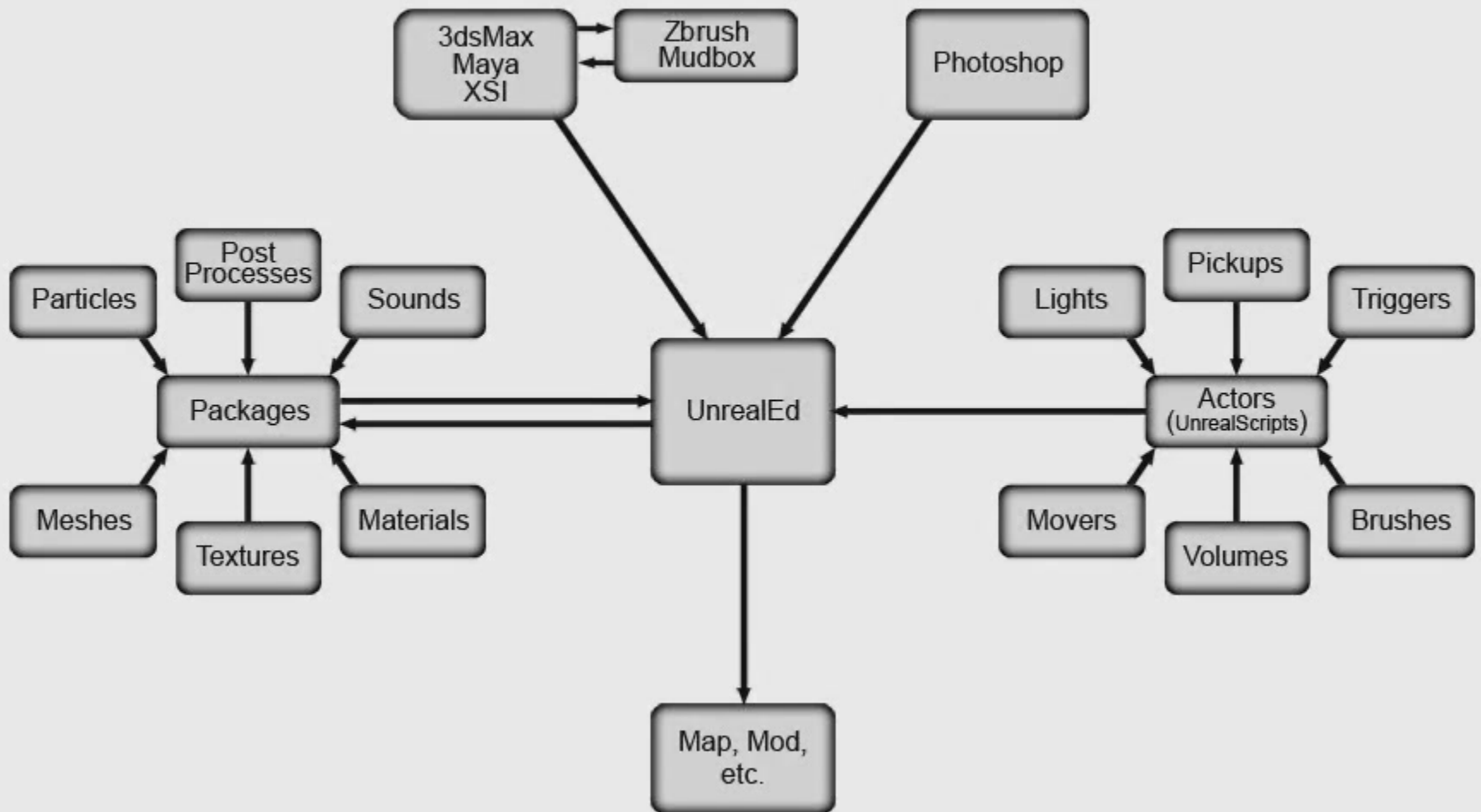
Kinect

- NIUI: OpenNI / Kinect API for UDK

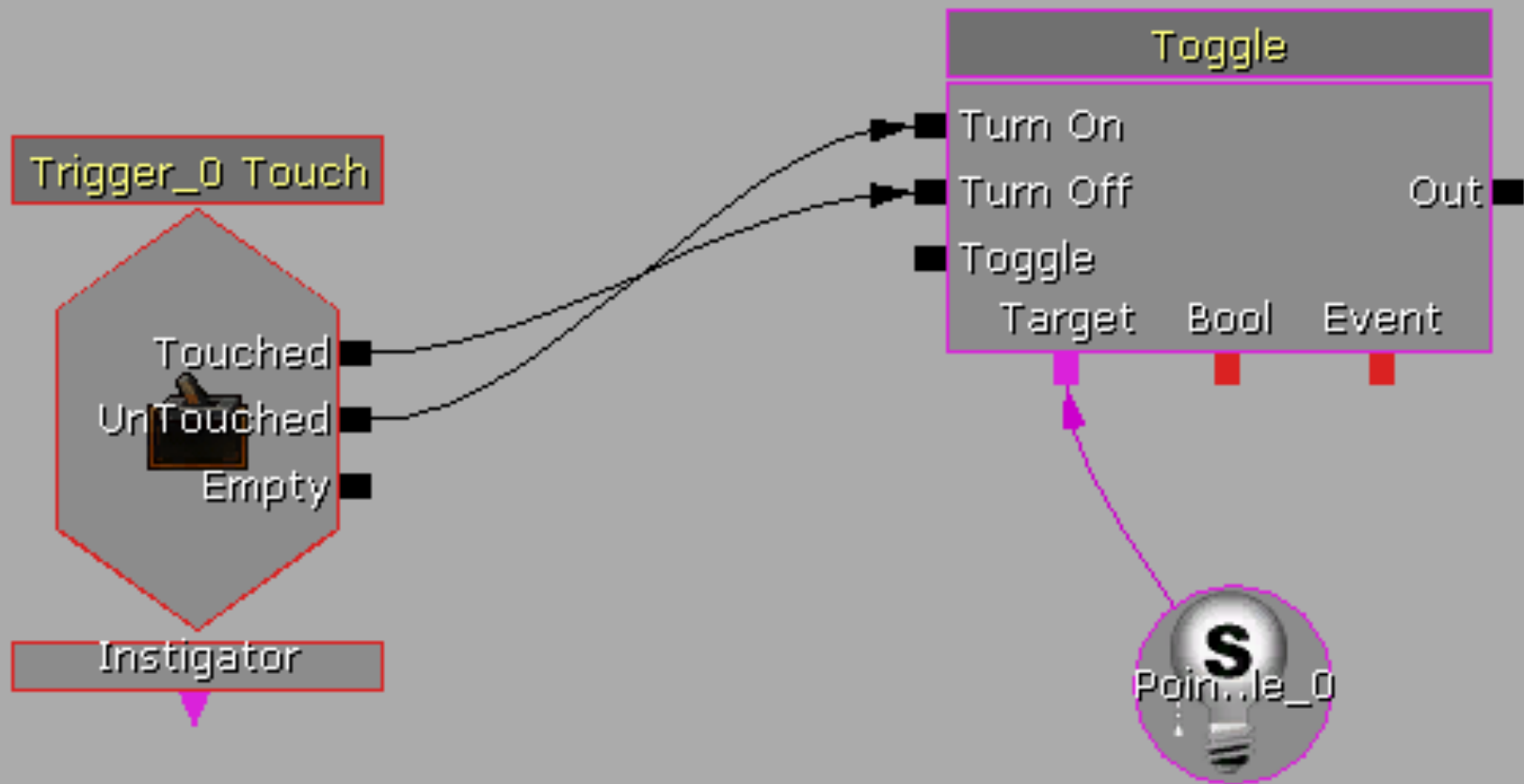
- UDKinect

It is based on the official Microsoft Kinect SDK and provides a fast easy-to-use interface for Kinect-based UDK applications.

UDK Workflow

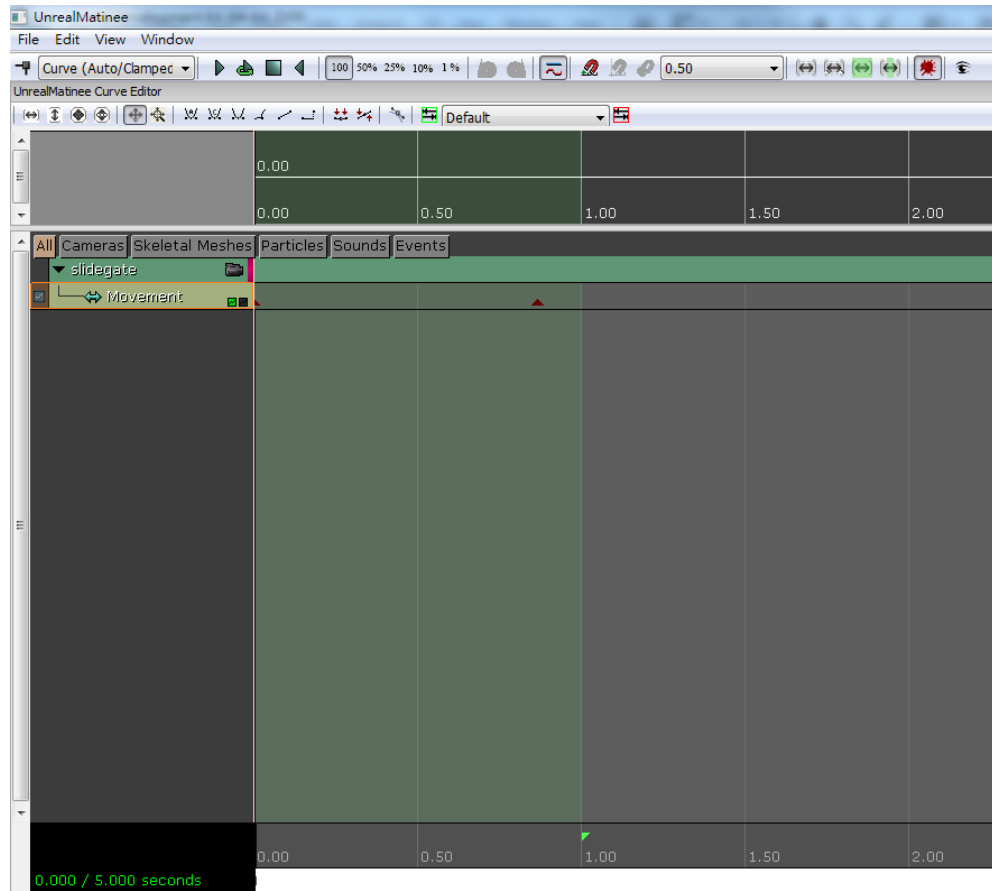


Kismet



Matinee

A scene animation tool that brings your game to life, and allows you to create in-game cinematics.



Conclusion

- Well documented
- Good programming features
- Free
- Supported by many gaming devices
- Can interact easily with third party hardwares \
- Only Windows version